

Americas Utilities

Analyzing water utility premiums - Upgrade AWK to Buy, Initiate WTRG at Neutral

We initiate coverage on Essential Utilities Inc. (WTRG) and transfer primary coverage on American Water (AWK) from Michael Lapides to Insoo Kim with the following updated views:

Analyzing the water utility premium valuation: fundamentals + ESG. While we recognize the current 10-11x relative P/E premium versus electric/gas utilities, we view this as justified given two quantifiable advantages: 1) our analysis shows every \$1 invested in water assets is worth more given a longer depreciable life vs electric, and 2) long visibility of above-average growth due to significant water pipe investment needs. In addition, we see continued ESG momentum sustaining additional relative premium for water utilities. With this in mind:

- **We upgrade AWK to Buy with a \$146 price target (16% total return)** as we see 1) best-in-class 8.3% EPS CAGR, 2) one of the highest beta-adjusted returns among Regulated Utilities (Exhibit 3), and 3) its ESG-favorable position as the only large-cap, pure-play water utility in the U.S. We view this defensive utility offering investors an attractive investment opportunity with double-digit upside potential.
- **We initiate coverage of WTRG at Neutral with a \$45 price target (7% total return)** given 1) robust 6.6% EPS CAGR post Peoples Gas acquisition, but 2) current multiples that largely reflect the water/gas sum-of-the-parts valuation.
- **AWK/WTRG both remain relatively defensive in the current COVID-19 environment**, outperforming the XLU by 7%/3% since March 1. Also, we favorably view their heavy residential revenue mix which could help offset potential near-term demand impact from commercial/industrial customers.

As highlighted in our recent note, we remain positive on the Utilities sector, both on an absolute and relative basis, given 10-year treasury yields below 1% and the regulated utilities' more resilient earnings power relative to that for the broader market, especially in the current COVID-19 environment. We see 15%/25% total return for Regulated Utilities and Diversified Utilities, respectively.

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PM Summary: Premium water utility multiples are justified; buy AWK

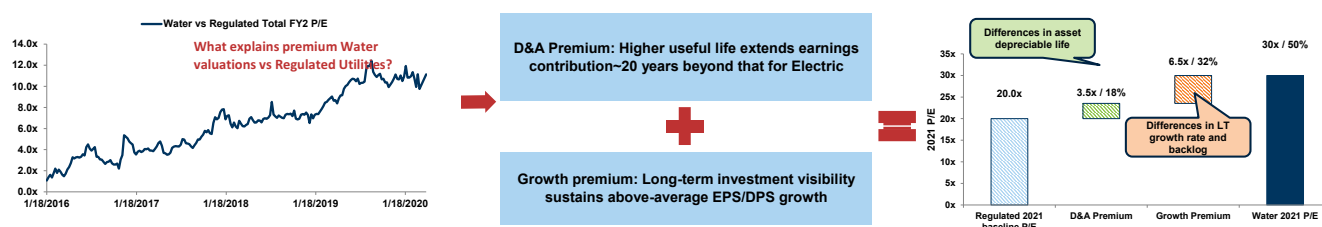
Despite the large relative P/E premiums for water utilities currently, we see two quantifiable advantages versus electric utilities that provide justification: 1) every \$1 invested in water assets is worth more given a longer depreciable life, and 2) material organic/inorganic growth visibility that should sustain above-average earnings growth longer-term. Combined with a favorable ESG screen, we believe water utilities could see further relative multiple expansion from current levels.

To this end, we transfer primary coverage of AWK from Michael Lapidès to Insoo Kim and upgrade from Neutral to Buy given best-in-class growth, more robust credit metrics, and its ESG-friendly status as a large-cap pure-play water utility, while we initiate on WTRG with a Neutral rating as we believe valuations fairly reflect the water/gas business mix.

Do water utilities deserve the current premium? We believe so. Based on our new and detailed analysis (please refer to the [following section](#)), we see certain fundamental advantages that justify the current 11.3x premium versus electric utilities. The primary drivers include:

- 1. D&A premium (3.5x):** Every \$1 invested to longer useful-life water assets (50 years vs. 30 years for electric) extends their value - translating into roughly 2% higher earnings growth.
- 2. Growth premium (6.5x):** We see water utilities sustaining their above-average earnings/dividend growth over electric utilities over at least the next 15 years, given significant water investment needs in the U.S.
- 3. Other qualitative factors:** 1) scarcity of water investor-owned utilities (IOUs), 2) ESG-related premium for pure-play water utilities (which we believe may impact WTRG given its new exposure to gas utilities).

Exhibit 1: Longer useful life and long-term investment visibility largely justify premium water valuations vs. electric/gas



Source: Goldman Sachs Global Investment Research

Following our analysis, we revise our regulated baseline water multiple from 25.5x to 30.0x, which incorporates the 10x D&A/growth premium to our 20x base P/E for electric/gas utilities on 2021E EPS.

With this revised base, we make the following recommendations:

- **Upgrade AWK to Buy:** best-in-class growth and a pure-play large-cap water utility. We expect AWK to continue to achieve above-average EPS growth, with our

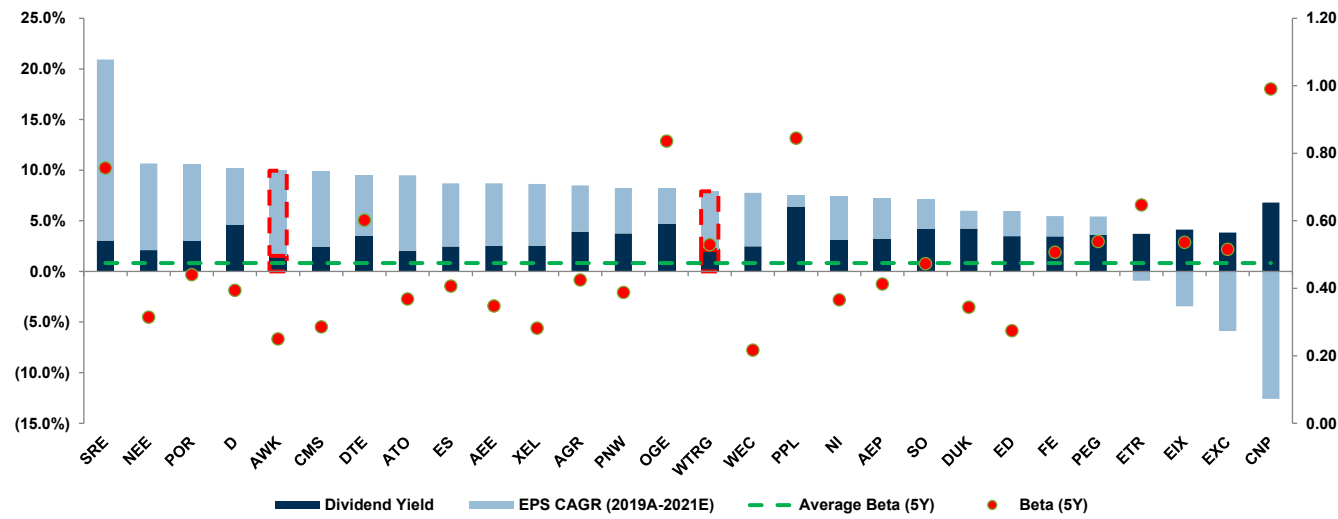
estimates (1% above consensus) implying an 8.3% EPS CAGR from 2019-2022 - at the middle of the company's 7-10% guidance - driven by a combination of core regulated investments, continued municipal utility acquisitions, and contributions from its contracted segments. Despite the 16% total return screening as comparable to 15% for Regulated Utilities, we believe AWK's below-average beta and ESG-friendly profile could drive further relative multiple expansion for this secular growth story.

- **Initiate on WTRG at Neutral: water/gas mix fully reflected in valuations.** We see WTRG's recent acquisition of Peoples Gas, a private gas utility business boosting consolidated rate base growth to 9.7% from 2019-2022 versus 9% prior as a stand-alone water utility, along with benefits from acquisition synergies. Our estimates - largely in-line with consensus - reflect a 6.6% EPS CAGR from 2019-2022, although we expect long-run growth to trend closer to rate base growth. We see the current 4.3x valuation discount versus water peers as largely appropriate given our view that gas utilities warrant a lower multiple. Our \$45 target incorporates a 27.3x blended P/E multiple, resulting in a 7% total return versus the sector average at 15%.

Balance sheet/credit metrics favor AWK. While both AWK and WTRG maintain an A issuer rating by S&P, we see AWK's 15-17% FFO/debt, versus WTRG's 12%, through 2022 more favorably in the current economic environment. Parent debt levels - sub-20% for AWK versus 25-30% for WTRG - also screen better for AWK, as WTRG's recently completed Peoples Gas acquisition contributing to a more levered balance sheet.

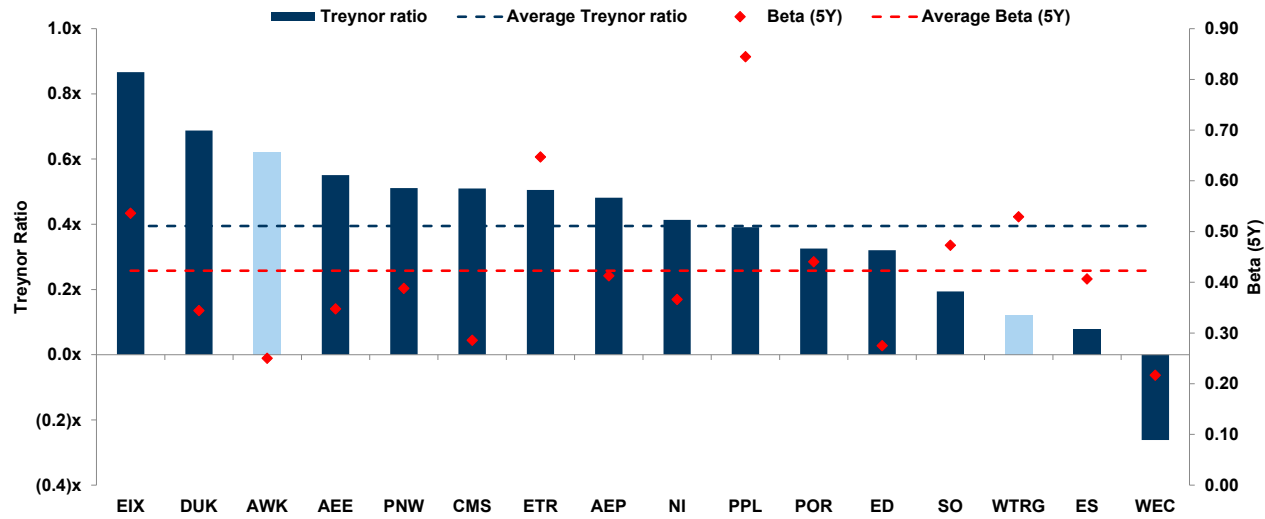
How much near-term demand impact do AWK/WTRG face from COVID-19? Could be modest. We note that both AWK and WTRG derive less than 10% of revenues from industrial customers, while more than 60% from residential customers. Given our view (see [recent note](#)) that residential volumes should see an increase in demand, we estimate that a +3%/-5%/-10% change in residential/commercial/industrial demand could actually result in a relatively neutral net income impact, while acknowledging the difficulty in estimating the net outcome.

Exhibit 2: We see AWK providing one of the best EPS growth and dividend yield in our coverage universe, all at a below-average beta...
Utilities coverage Dividend yield, EPS CAGR (2019A-2021E) & 5Y Beta



Source: FactSet, Company data, Goldman Sachs Global Investment Research

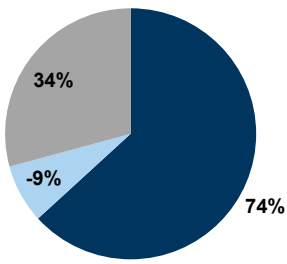
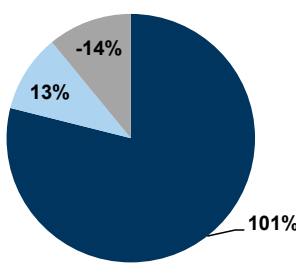
Exhibit 3: ...with one of the best beta-adjusted total return potential among Regulated Utilities.
AWK/WTRG Risk-adjusted total return (Treynor ratio) vs Regulated Utilities coverage



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 4: We favor AWK for its best-in-class EPS growth and ESG-friendly pure-play water profile

Company Summary

	WTRG	AWK
Rating	Neutral (Initiating)	Buy (from Neutral)
Total Return	7%	16%
Market Cap	\$9.6bn	\$23.0bn
EPS Mix (2020E)	 <p>■ Water utility ■ Other ■ Gas utility</p>	 <p>■ Regulated ■ Market Based ■ Parent</p>
Utility States	Water: PA, TX, IL, IN, OH, NC, VA, NJ Gas: PA, WV, KY	Water (regulated): NJ, PA, MO, IL, CA, IN, WV, GA, HI, IA, KY, MD, MI, NY, TN, VA
Customer Growth/ Customer count (2018A)	Water utility - 2.3% (Growth through acquisition - 1.4%, Organic growth - 0.9%) Customer count - 10.1 mn	Water utility - 0.7% (Growth through acquisition - 0.3%, organic growth - 0.4%) Customer count - 31.8 mn
Reg. Utility Earnings Growth ('19-'22E)	6.6%	8.3%
Investment Thesis	(+) Peoples Gas acquisition boosts rate base growth to 9-10% and 6-7% EPS growth through 2022 (+) Synergy from Peoples Gas acquisition (-) Water/gas mix a potential headwind to further multiple expansion from an ESG perspective	(+) Above-average 8.3% EPS CAGR from 2019-2022E and 10% DPS CAGR (+) Size benefits to take advantage of accretive municipal acquisition (+) Status as the only large-cap, pure-play water utility - favorable from a scarcity/ESG perspective
Near-term Risk	* Lower than expected synergy benefits from the acquisition of Peoples gas * Water/gas utility growth impacted by current COVID-19 pandemic	* Regulated/non-regulated segment growth impacted by current COVID-19 pandemic
Company Overview	*Water utility business in 8 states (PA being the largest one) *Recent acquisition of Peoples Gas adds PA, WV and KY gas jurisdictions * 2nd largest publicly traded water/gas utility company	* Largest publicly traded utility company in the US *Owns water and waste water utility services to residential, commercial and industrial customers *Operates in 46 states in the US and Ontario, Canada
Credit Rating (Issuer Credit) (Moody's/S&P)	--/A	Baa1/A
Sub-Sector (% earnings)	Water utility (70%) Gas utility (30%)	Water utility (87%) Non-regulated businesses (13%)

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 5: AWK has largely maintained its ESG fund overweight status, while WTRG has dropped more meaningfully since prior to Peoples Gas acquisition completion

Top 10 ESG Relative overweight companies in US as of Sept 2019 and Apr 2020

Top 10 ESG Relative overweight companies in US (April 2020)

Company	GICS 1
1 NASDAQ INC ORD	Financials
2 XYLEM INC ORD	Industrials
3 IDEX CORP ORD	Industrials
4 EPAM SYSTEMS INC ORD	Information Technology
5 TRIMBLE INC ORD	Information Technology
6 UBER TECHNOLOGIES INC ORD	Industrials
7 GUIDEWIRE SOFTWARE INC ORD	Information Technology
8 PTC INC ORD	Information Technology
9 DENTSPLY SIRONA INC ORD	Health Care
10 VERISK ANALYTICS INC ORD	Industrials
14 AMERICAN WATER WORKS COMPANY INC	Utilities
21 ESSENTIAL UTILITIES INC ORD	Utilities

Top 10 ESG Relative overweight companies in US (Sept 2019)

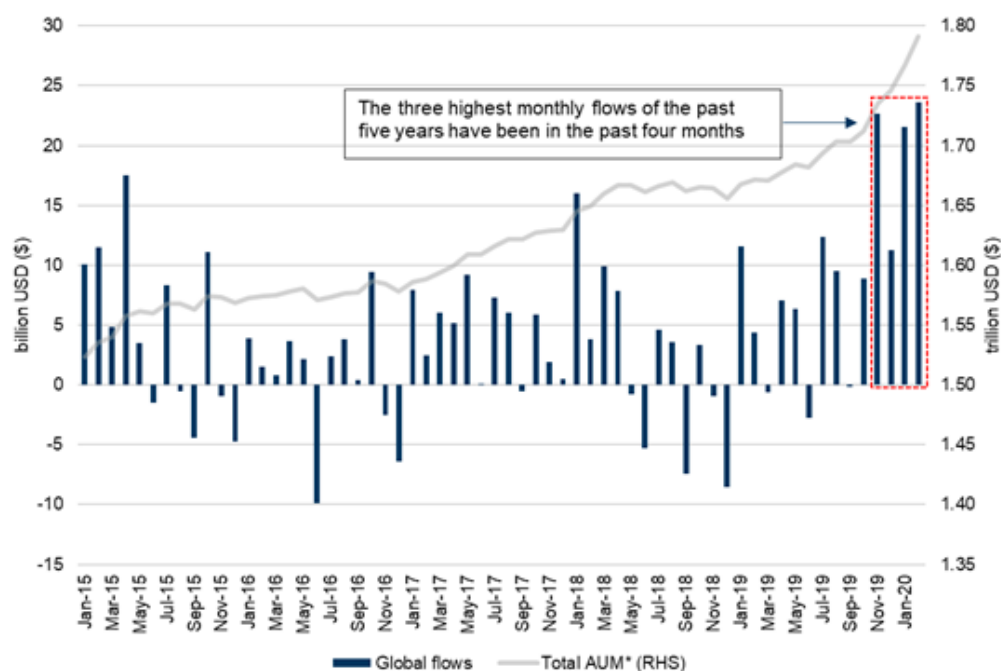
Company	GICS 1
1 Xylem Inc	Industrials
2 Trimble Inc	Information Technology
3 Aqua America Inc	Utilities
4 First Solar Inc	Information Technology
5 A.O. Smith Corp	Industrials
6 Hologic Inc	Health Care
7 American Water Works Company Inc	Utilities
8 Gap Inc	Consumer Discretionary
9 Toro Co	Industrials
10 First American Financial Corp	Financials

Companies with market caps > \$5B and domiciled in US; *ESG Relative overweights are calculated by dividing a company's ESG fund universe ACWI constituent weighting over its ACWI weighting; ACWI= MSCI All Country Weight Index

Source: Bloomberg, Morningstar, Goldman Sachs Global Investment Research

Exhibit 6: GS SUSTAIN: Positive ESG flows have persisted remaining robust through the early phases of the COVID-19 crisis

Monthly ESG fund flows (January 2015 through February 2020)

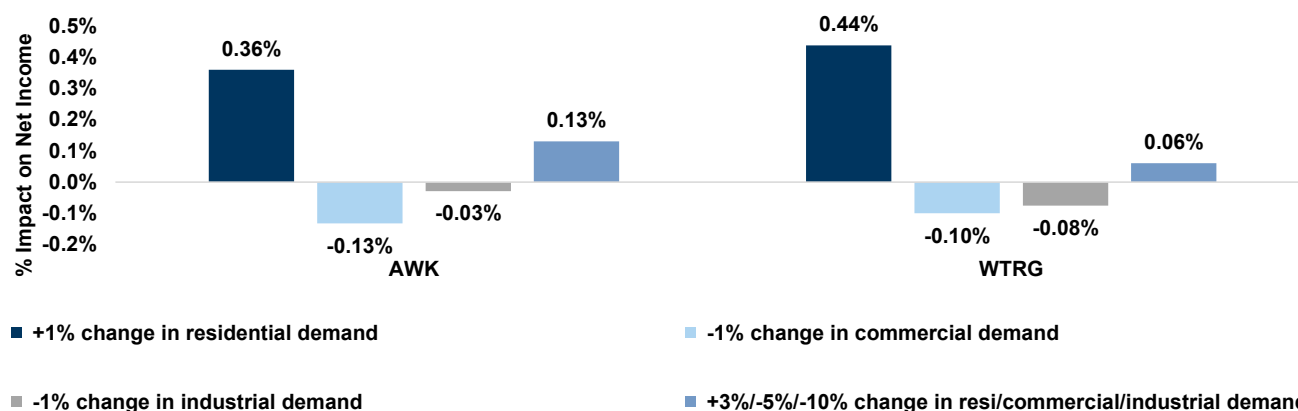


*AUM values are derived from historical flows and agnostic of market effect

Source: Morningstar

Exhibit 7: We see a moderate earnings impact for every 1% change in water demand, with higher residential demand that could potentially offset commercial/industrial declines

% Impact on Net Income from change in residential/commercial/industrial demand



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 8: We favor AWK's balance sheet and credit metrics versus WTRG, although both screen relatively stable in our view

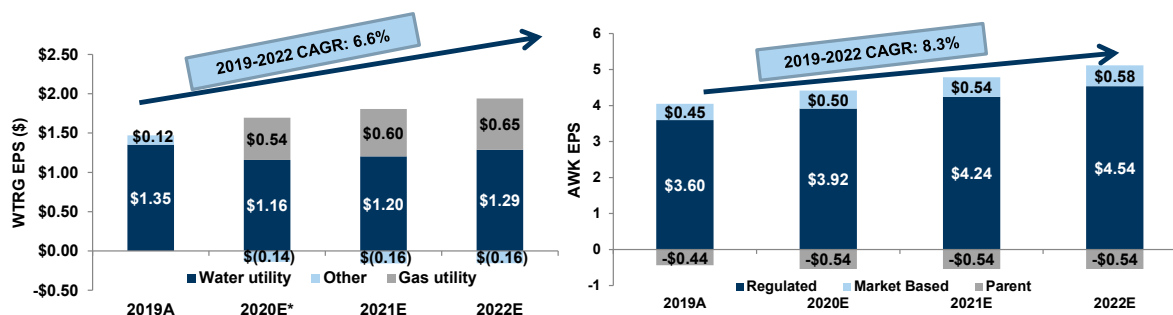
AWK/WTRG GSe Credit metrics

Credit metrics (Gse)	AWK			WTRG		
	2020	2021	2022	2020	2021	2022
Net Debt/cap	61%	60%	58%	49%	51%	52%
Net Debt/EBITDA	5.2x	5.0x	4.7x	7.3x	6.4x	6.4x
FFO/Debt	15%	16%	17%	11%	12%	12%
Holdco debt (% of total debt)	19%	18%	18%	34%	29%	27%
Credit rating (Parent)	A/Baa1 (S&P/Moody's)			A/NR (S&P/Moody's)		

Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 9: We see robust EPS growth at AWK, with a more modest growth at WTRG through 2022 given timing of rate recovery and transitions in tax-advantaged mechanisms...

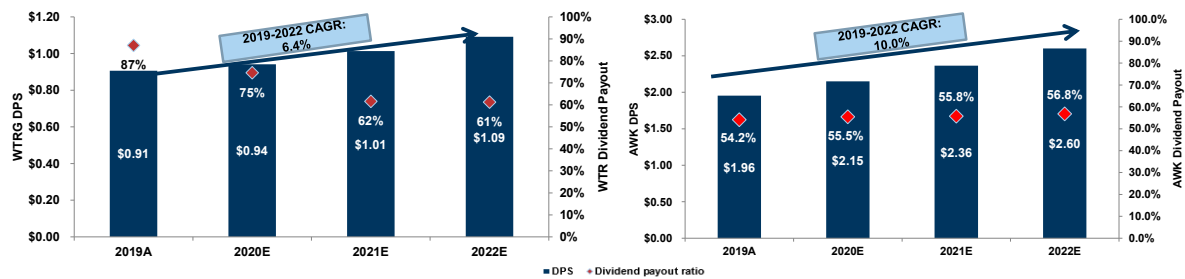
EPS 2019A-2022E



* 2020 incorporates full-year of Peoples Gas earnings ; 2021 summation for WTRG off by \$0.01 due to rounding issue

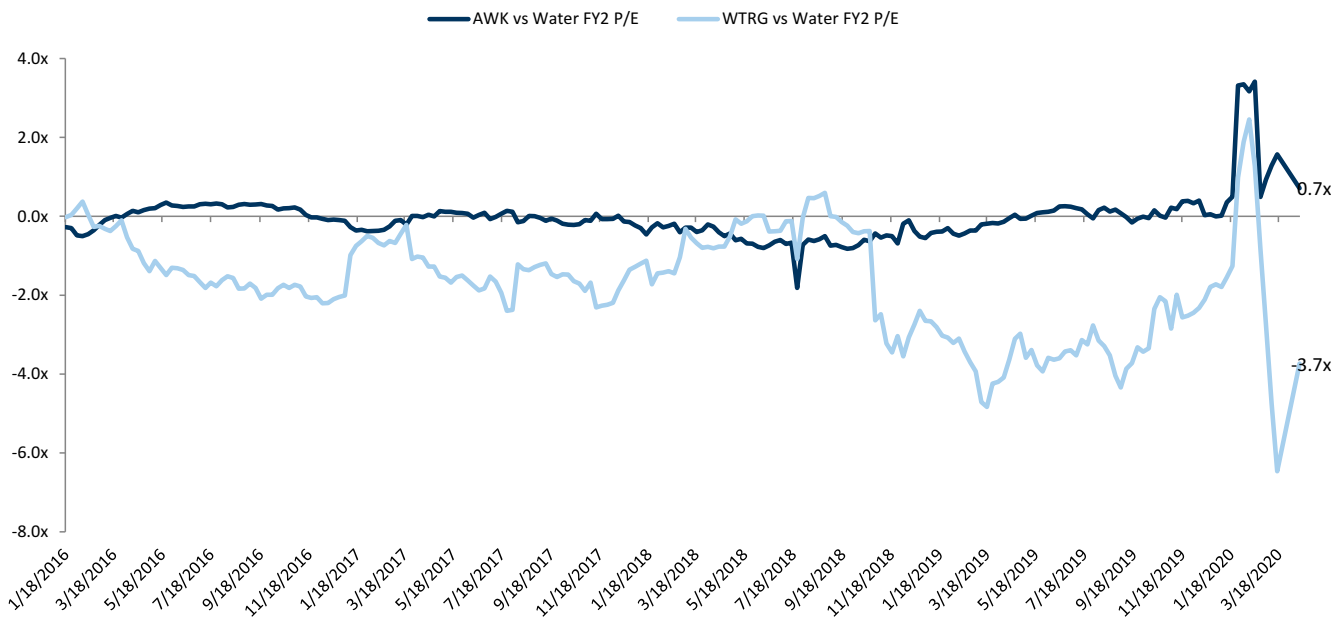
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 10: ...with a more robust dividend growth for AWK
DPS and payout as % of consolidated EPS



Source: Company data, Goldman Sachs Global Investment Research

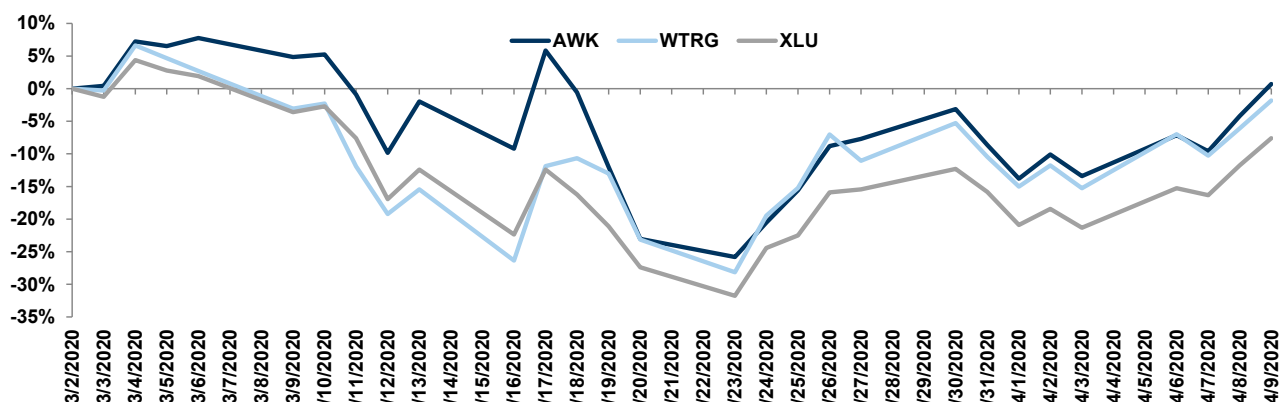
Exhibit 11: We view AWK's premium valuation as sustainable given its best-in-class growth and ESG-friendly profile, while WTRG's relative discount screens appropriate given its gas utility exposure
AWK & WTRG vs Water FY2 P/E



Source: Goldman Sachs Global Investment Research, FactSet

Exhibit 12: Both AWK and WTRG continue to remain relatively defensive in the current COVID-19 environment, outperforming the XLU since March 1

AWK/WTRG/XLU Performance since March 2020



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 13: We expect further multiple expansion for AWK given best-in-class growth, low beta, and favorable ESG profile

Water Comparable Valuation

	Ticker	Rating	Close 4/13/20	12-Mo Px. Tgt	Tot Ret to Target	EPS			P/E			Dividend Yield	EPS CAGR 2019A-21E
						2019A	2020E	2021E	2019E	2020E	2021E		
American Water	AWK	Buy	\$127.24	\$146	16%	\$3.61	\$3.88	\$4.24	35.3x	32.8x	30.0x	1.5%	8.4%
American States Water	AWR	NC	\$86.42	—	—	\$2.24	\$2.21	\$2.34	38.6x	39.0x	36.9x	1.3%	2.2%
Essential Utilities	WTRG	Neutral	\$42.80	\$45	7%	\$1.47	\$1.56	\$1.65	29.1x	27.5x	26.0x	2.1%	5.8%
California Water Service	CWT	NC	\$52.87	—	—	\$1.31	\$1.53	\$1.70	40.4x	34.6x	31.1x	1.5%	14.0%
Middlesex Water Company	MSEX	NC	\$62.37	—	—	\$2.01	\$2.04	\$2.19	31.0x	30.6x	28.5x	—	4.3%
SJW Corp.	SJW	NC	\$62.66	—	—	\$0.82	\$2.31	\$2.50	76.4x	27.1x	25.1x	1.9%	74.5%
York Water Company	YORW	NC	\$42.39	—	—	\$1.11	\$1.21	\$1.25	38.2x	35.2x	33.9x	—	6.1%
Water Utilities Mean					12%				41.3x	32.4x	30.2x	1.7%	16.5%
Water Utilities Median					12%				38.2x	32.8x	30.0x	1.5%	6.1%
Regulated Utilities Mean					15%				20.8x	20.1x	18.9x	3.2%	5.4%
Regulated Utilities Median					16%				19.6x	19.4x	18.4x	3.2%	5.6%

Estimates for Non-Covered Companies represent Factset Consensus

Source: Goldman Sachs Global Investment Research, FactSet

Water Utilities – abundant growth opportunities in fragmented market

Water utilities are responsible for the operation and maintenance of water treatment plants and distribution networks, crucial for ensuring reliability and quality of supply. Water and wastewater services are primarily the two sources of revenue for a water utility.

■ **Water services involve: (1) sourcing, (2) treatment and (3) distribution of water.**

We outline the three steps in further detail below:

- **Pumping Station:** A pumping station abstracts water from aquifers, rivers, reservoirs and lakes, using pumps, pipes and electricity.
- **Treatment Facility:** After drawing the water, it is sent to a treatment facility, where chemicals and filtration systems minimize impurities and meet federal, state and local quality standards. Chemical and electric costs stand out as the two largest O&M expenses at a treatment facility.
- **Distribution System:** The US water pipe network stretches across 70,000 miles, distributing water to the ultimate customers. Key periods of water pipe installations include: (1) late 1800s, (2) the 1920s and (3) the 1940s/1950s. Given the age of the current distribution system, pipe replacement spending represents the largest share of investor owned utilities' capital spending budget for the foreseeable future.

- **Wastewater services** involve the collection of wastewater from customers' premises through sewer lines. The wastewater is then transported through a sewer network to a treatment facility, where it is treated to meet required regulatory standards for wastewater before being returned to the environment. The solid waste by-product of the treatment process is disposed of or recycled in accordance with applicable standards and regulations.

Aging infrastructure and increased regulation in the sector are primary drivers for the need to modernize the country's water and wastewater infrastructure

related to water quality and the management of water and wastewater residual discharges. Because pipe assets last a long time, water systems that were built in the latter part of the 19th century and throughout much of the 20th century have not, for the most part, experienced the need for pipe replacement on a large scale. To put this aging infrastructure into context, the American Water Works Association (AWWA) estimates that the cost of restoring underground pipes will total at least \$1 trillion through 2035, without including the cost of constructing new infrastructure or repairing treatment plants. The estimate assumes pipes are replaced at the end of their useful lives. Over a 40-year period, through 2050, AWWA estimates the needs will exceed \$1.7 trillion. Replacement needs account for about 54% of the national total, with the balance attributable to population changes over that period.

The key regulations that govern the distribution of water include the Safe Drinking Water Act and the Clean Water Act:

- **Federal Safe Drinking Water Act (1974):** The Federal Safe Drinking Water Act

established national quality standards for drinking water. Under the SDWA, the EPA prescribes the legal limits of contaminants and sets water-testing schedules.

- **Clean Water Act (1972):** The Federal Clean Water Act regulates discharges from drinking water and wastewater treatment facilities into lakes, rivers, streams and groundwater.

Exhibit 14: The aging water and wastewater infrastructure in the United States require replacement and modernization, with at least \$1 trillion investment potential through 2035

Aging US Pipe Infrastructure



**Wooden
water pipes***



Corroded water pipe*



*Not American Water Pipes

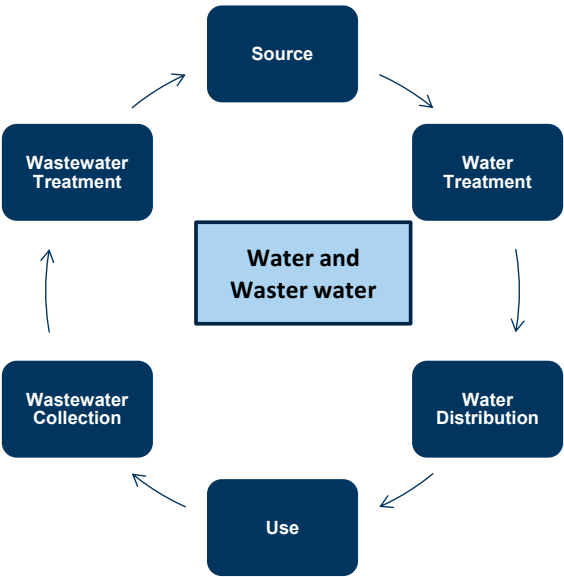
Source: AWK Dec 2017 Investor Presentation

The water utility sector is highly fragmented — more than 50,000 water utility systems exist nationwide — with investor-owned and privately held water utilities operating less than 15% of these systems. According to the U.S. Environmental Protection Agency (EPA), based on the 2015 U.S. Census American Housing Survey, approximately 89% of the U.S. population obtains its water from community water systems, and 11% of the U.S. population obtains its water from private wells. Of the approximately 50,000 community water systems in the U.S., 81% serve less than 3,300 customers, making the water industry the most fragmented of the major utility industries (natural gas, electric, water/wastewater). The majority of these community water systems are government-owned, and the balance of the systems are regulated utilities.

Although not as fragmented as the water industry, the wastewater industry in the U.S. also presents opportunities for consolidation. According to the EPA's most recent survey of wastewater treatment facilities (which includes both government-owned facilities and regulated utility systems) in 2012, there were approximately 15,000 such facilities in the nation serving approximately 76% of the U.S. population. The remaining population represents individual homeowners with their own treatment facilities; for example, community on-lot disposal systems and septic tank systems. A majority of wastewater facilities are government-owned rather than regulated utilities.

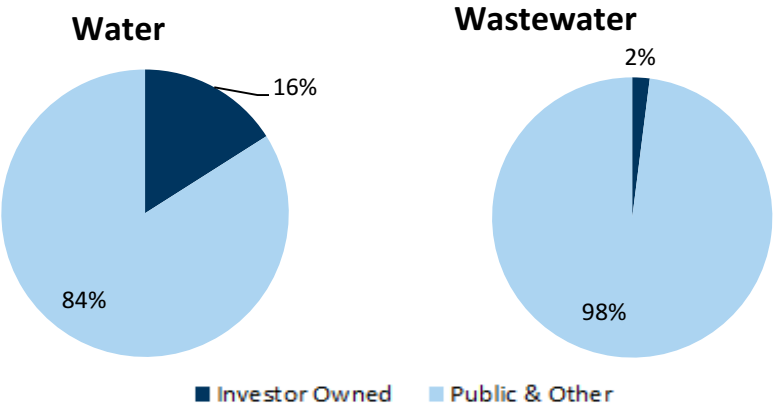
Fair Market Value (FMV) legislation will continue to motivate consolidation of the water and wastewater industry, providing municipalities with an option for exiting the business if they are dealing with challenges associated with their aging, deteriorating water and wastewater assets, do not have the expertise or technical capabilities to continue to comply with ever-increasing environmental regulations or simply want to focus on other community priorities. The sector has been ripe for consolidation for decades and the largest water utilities have recently altered their strategic growth efforts to focus on buying mid-sized municipal water and wastewater systems fueled by fair market value (or FMV); legislation allows the water utilities to include into rate base the fair market value of the acquired municipal water assets instead of the depreciated original cost of water/wastewater assets. The legislation includes a process for engaging two independent utility valuation experts to perform appraisals that are filed with the public utility commission and then averaged and compared to the purchase price. The rate-making rate base is the lower of the average of the appraisals or the purchase price and is subject to regulatory approval. FMV is on the books in 10 states, including several of AWK/WTRG operating jurisdictions, and is pending before state legislatures in three more states.

Exhibit 15: Water utilities are responsible for the operation and maintenance of water treatment plants and distribution networks, crucial for ensuring reliability and quality of supply
Water and Wastewater Cycle



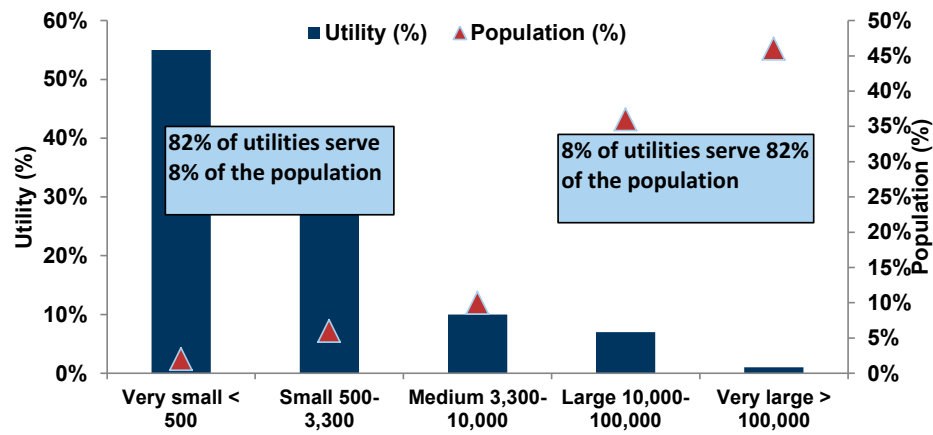
Source: Goldman Sachs Global Investment Research

Exhibit 16: The sector remains ripe for consolidation given that investor-owned and privately held water utilities operate just 16% of these systems...
Water Industry- Investor Owned vs Public & Other market share



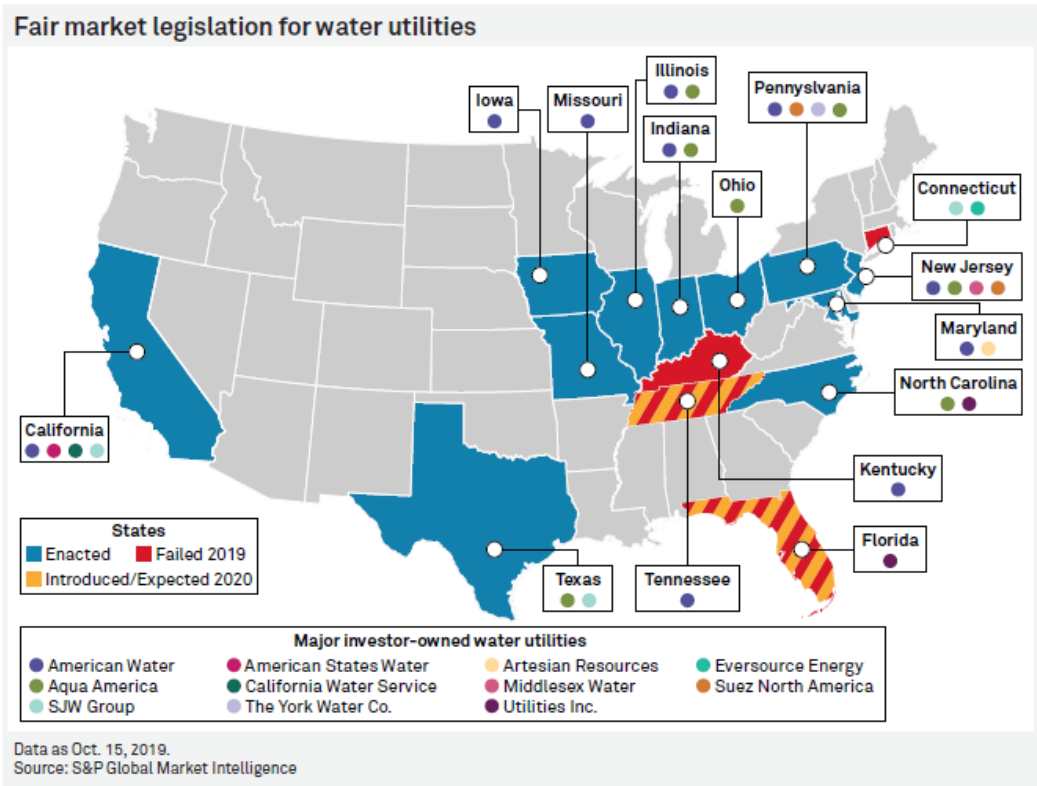
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 17: ... within a highly fragmented industry where of the 51,000 community water systems (CWS) only 4,221 or 8%, serve more than 246 million or 82%, of the total population.
State of the Water Industry - System size by population served



Source: Company data, Goldman Sachs Global Investment Research, AWWA, Environmental Protection Agency (EPA)

Exhibit 18: FMV legislation provides further impetus for consolidation in the sector and allows an accretive approach to valuing the acquired system's assets; currently in the books in 11 states and pending in 2 more states.
Fair Market Legislation for Water Utilities



Data as of Oct 25, 2019

Source: SNL

What factors explain premium water valuations vs other regulated utilities?

Water utilities currently trade at a 30.2x FY2 P/E multiple, at a 11.3x premium to regulated electric/gas utilities trading at a 18.9x blended FY2 P/E multiple. Over the past few years, many investors had difficulty validating the valuation gap, questioning what level is justified. Fundamentally, we believe higher EPS/DPS growth trajectory, both historically and pro-forma, serves as the primary driver, with water utilities having grown EPS at a ~3%/2% CAGR above electric/gas utilities, respectively, over the past 10 years. The next task is determining how long water utilities can sustain this earnings gap, which we quantify in the [following section](#). Below, we note a few factors (both quantitative and qualitative) that account for premium water valuations vs regulated electric detailed below:

Quantitative factors:

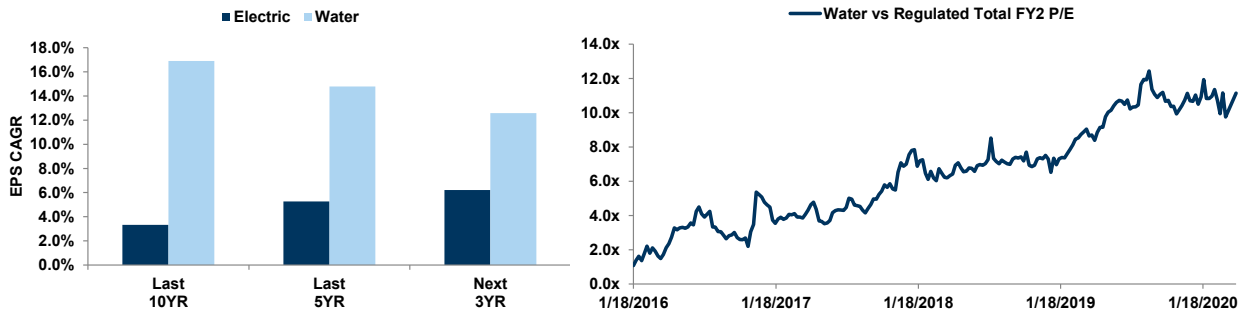
- **Longer asset life (D&A premium)** — Our analysis shows that every dollar invested in water assets yields a better return vs that for electric assets, driven by higher useful life (~20 years) extending the earnings potential. This D&A advantage translates into 2% in incremental EPS growth.
- **Continued robust capital program (Growth premium)** — As mentioned in the previous section, water IOUs have significant long-term investment opportunities (pipe replacement, treatment facilities, storage facilities, dams, wells and pumps), supported by favorable regulatory mechanisms to reduce lag in rate recovery. In addition, municipal acquisitions by IOUs continually add additional rate base backlog.

Qualitative factors:

- **Scarcity** — There are only a handful of investable water utilities for public investors. AWK, the largest water utility, has a market capitalization of more than \$24 billion, and the remaining 11 investor-owned utilities have a combined market capitalization of just \$22 billion. Trading volumes for the smallest water utilities average below 20,000 shares daily, which we believe could be beneficial for larger water IOUs like AWK and WTRG.
- **Take-out potential** — While initially slow, consolidation within the industry has accelerated during the past 30 years. Acquisitions by domestic and international utilities and by private equity has shrunk the group to just 12 investor-owned water utilities, while a handful of other large water utilities are owned by private equity investors. We attribute some of the relative premium of small-cap water utilities to take-out potential.
- **ESG focus** — Investor focus on ESG (environmental, social, governance) factors have increased meaningfully in recent years. While social and governance factors apply to many IOUs, pure-play water utilities satisfy the environmental factor, which could continue to support valuations. We note that AWK is a pure-play water utility, while WTRG now derives ~30% of its earnings from the recently acquired Peoples Gas business.

Exhibit 19: We note higher weighted average EPS growth CAGR for Water utilities vs Electric/Gas over the past 10 years have contributed to increasing relative premiums vs. Regulated Utilities...

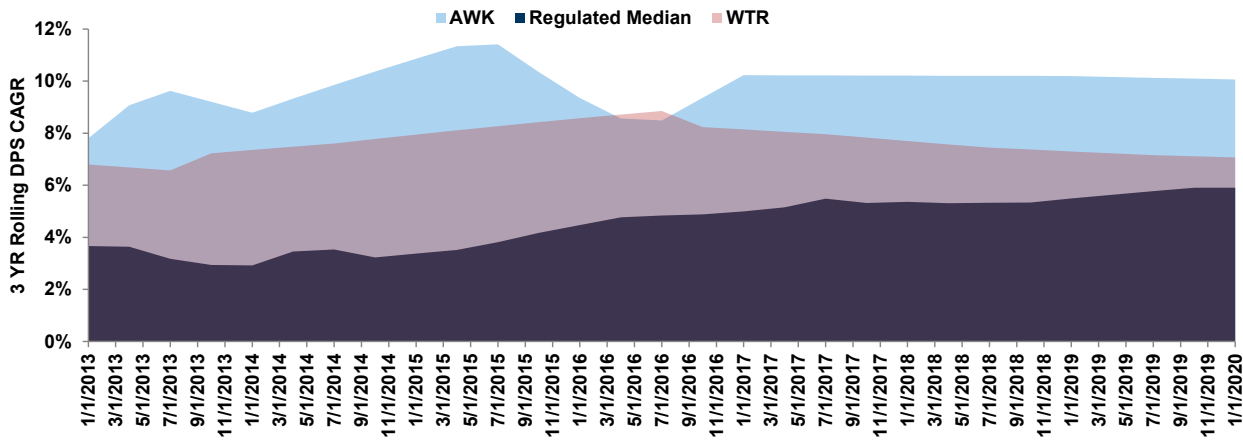
Market cap weighted EPS Growth CAGRs - Water vs Electric; Water vs Regulated FY2 P/E



Source: Company data, Goldman Sachs Global Investment Research, FactSet

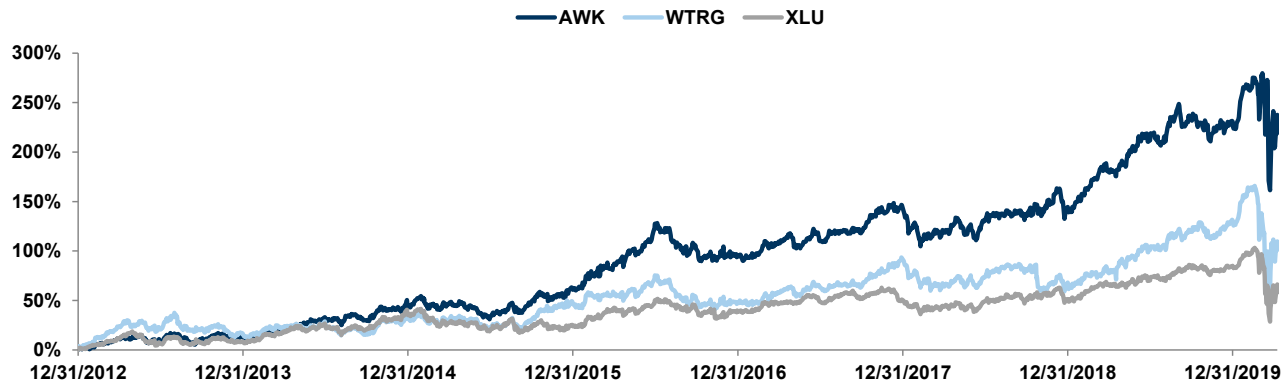
Exhibit 20: ... with AWK and WTRG consistently recording a DPS CAGR above regulated peers...

3 yr Rolling DPS CAGR



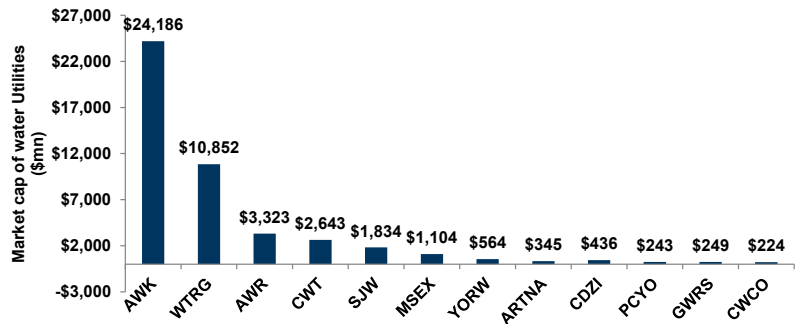
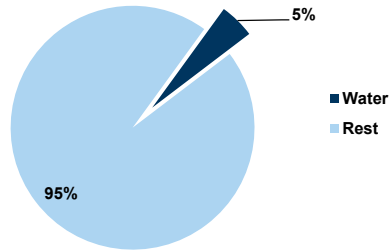
Source: Goldman Sachs Global Investment Research, FactSet

Exhibit 21: ... and rewarding investors with superior returns over the past 7 years vs the XLU
AWK/WTRG/XLU Performance since 2013



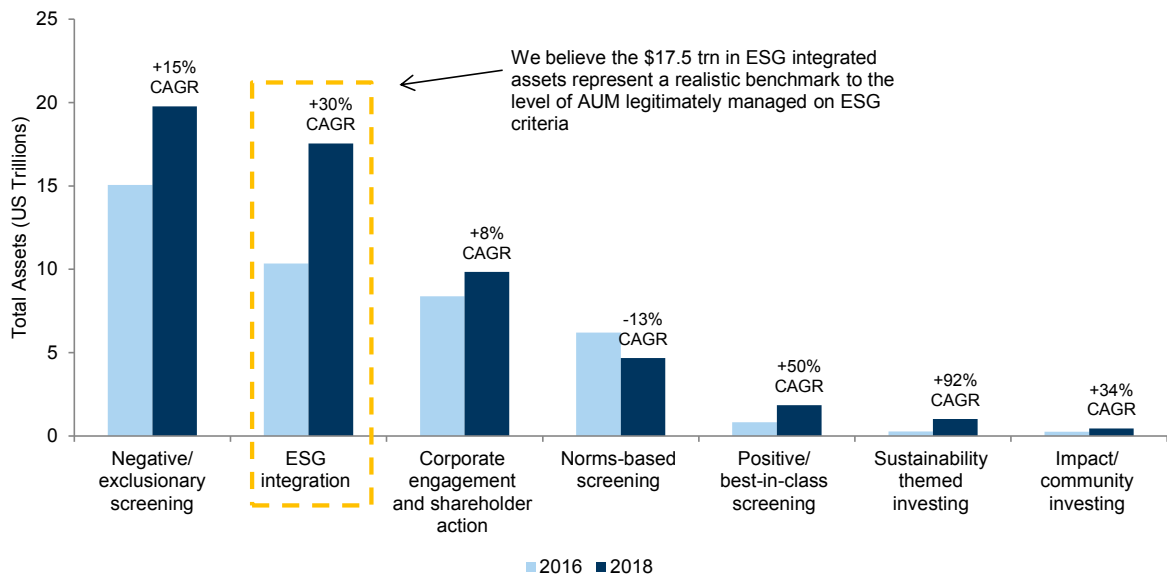
Source: Goldman Sachs Global Investment Research, FactSet

Exhibit 22: We note that the comparable group for Water companies remains limited, with 12 publicly traded water utilities in the US, including AWK and WTRG, and only 6 companies with a market capitalization in excess of \$1 billion.
Water utilities market cap as % of total utilities market cap; Water utilities market cap (\$mn)



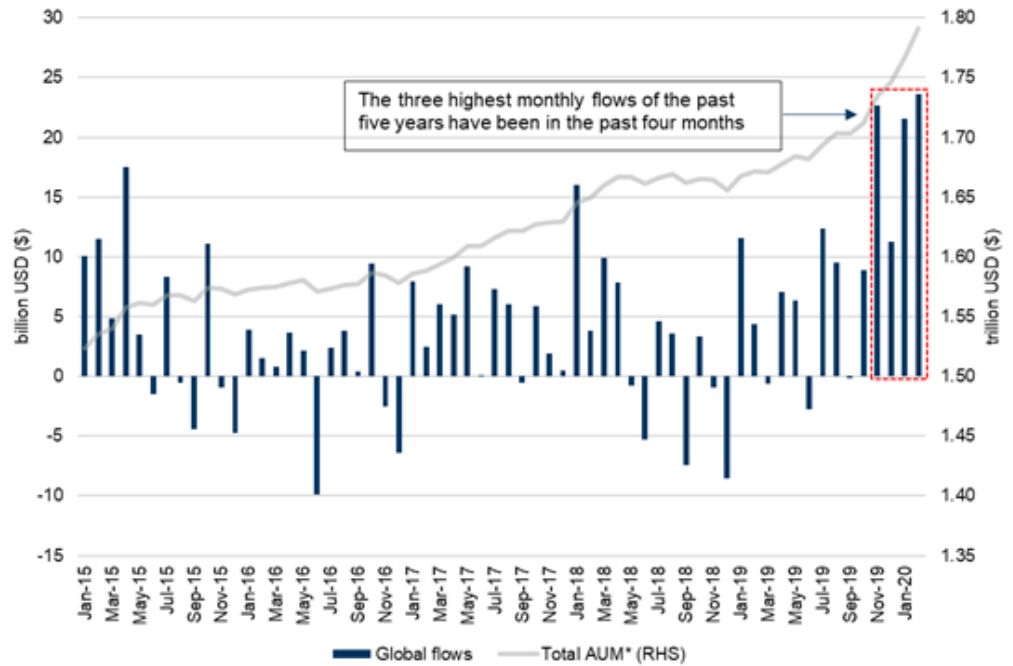
Source: Goldman Sachs Global Investment Research, FactSet

Exhibit 23: GS SUSTAIN: With ESG an increasingly important criteria for investors and fund flows...
Growth of investment assets incorporating ESG by type, including double counting (2016-2018)



Source: Global Sustainable Investment Alliance

Exhibit 24: ... that have remained robust through the early phases of the COVID-19 crisis (GS SUSTAIN)...
Monthly ESG fund flows (January 2015 through February 2020)



*AUM values are derived from historical flows and agnostic of market effects

Source: Morningstar

Exhibit 25: ...we expect AWK's large-cap, pure-play water utility profile to benefit from ESG fund positioning.

AWK/WTRG Ranking based on ESG Relative overweight*

Top 10 ESG Relative overweight companies in US (April 2020)

Company	GICS 1
1 NASDAQ INC ORD	Financials
2 XYLEM INC ORD	Industrials
3 IDEX CORP ORD	Industrials
4 EPAM SYSTEMS INC ORD	Information Technology
5 TRIMBLE INC ORD	Information Technology
6 UBER TECHNOLOGIES INC ORD	Industrials
7 GUIDEWIRE SOFTWARE INC ORD	Information Technology
8 PTC INC ORD	Information Technology
9 DENTSPLY SIRONA INC ORD	Health Care
10 VERISK ANALYTICS INC ORD	Industrials
14 AMERICAN WATER WORKS COMPANY INC	Utilities
21 ESSENTIAL UTILITIES INC ORD	Utilities

Top 10 ESG Relative overweight companies in US (Sept 2019)

Company	GICS 1
1 Xylem Inc	Industrials
2 Trimble Inc	Information Technology
3 Aqua America Inc	Utilities
4 First Solar Inc	Information Technology
5 A.O. Smith Corp	Industrials
6 Hologic Inc	Health Care
7 American Water Works Company Inc	Utilities
8 Gap Inc	Consumer Discretionary
9 Toro Co	Industrials
10 First American Financial Corp	Financials

Companies with market caps > \$5B and domiciled in US; *ESG Relative overweights are calculated by dividing a company's ESG fund universe ACWI constituent weighting over its ACWI weighting; ACWI= MSCI All Country Weight Index

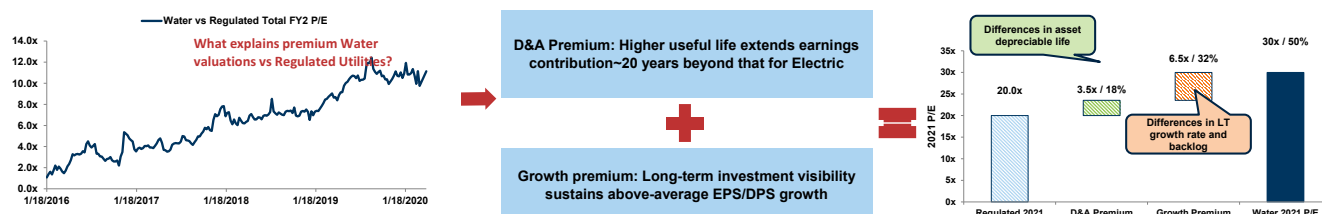
Source: Bloomberg, Goldman Sachs Global Investment Research, Morningstar

What premium do water utilities warrant?

Our analysis shows that water utilities deserve a meaningful P/E premium above electric utilities, with the current 11.3x premium largely justified.

We believe two quantifiable factors - D&A and investment growth - largely justify the current relative premium. We detail these calculations below.

Exhibit 26: We introduce our analysis on the earnings growth differential between water, electric and gas utilities, which we break into two components to arrive at our 30.0x baseline water multiple vs 20.0x baseline for our regulated coverage



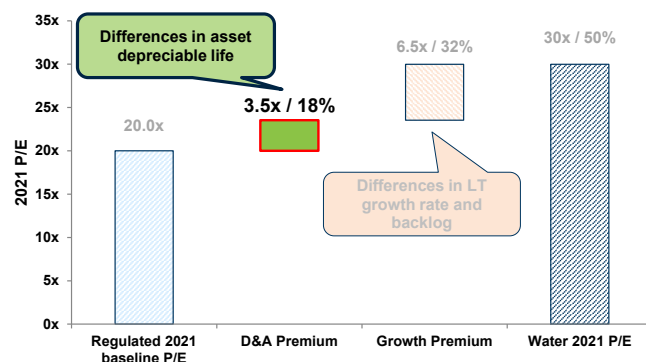
Source: Goldman Sachs Global Investment Research

1. D&A premium:

A higher useful life for water assets (50 years vs 30 years for electric) extends the earnings potential ~20 yrs beyond what that realized for electric assets, with earnings differential increasing steadily over time, warranting for a 17%/3.5x premium for each dollar invested in rate base.

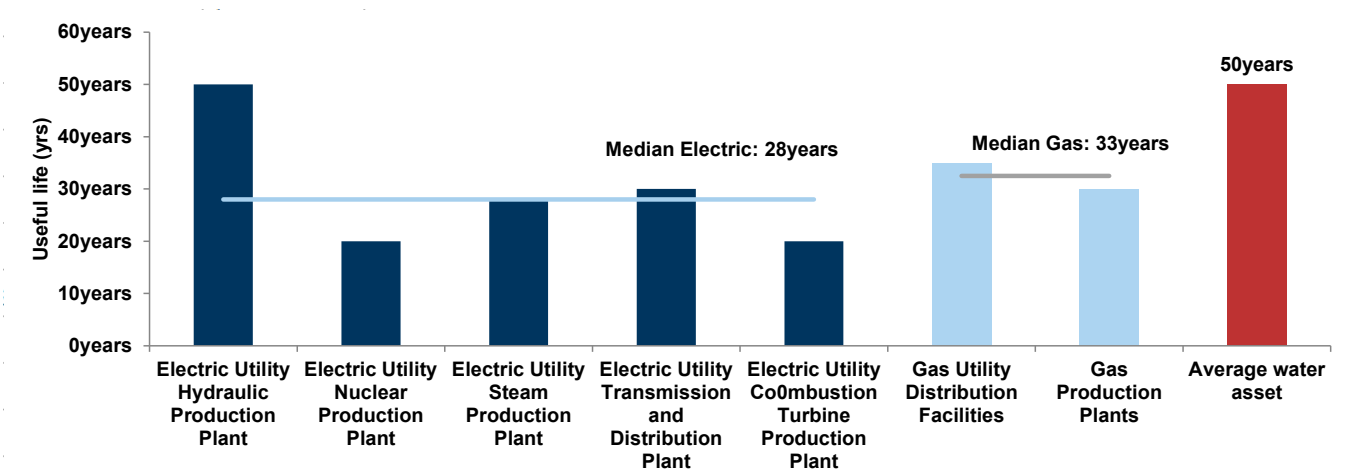
Exhibit 27: We attribute around 18% (3.5x) of water utilities' current 57% (11.3x) premium vs Regulated Utilities to longer depreciable asset life for water assets

GS 2020 Water baseline multiple



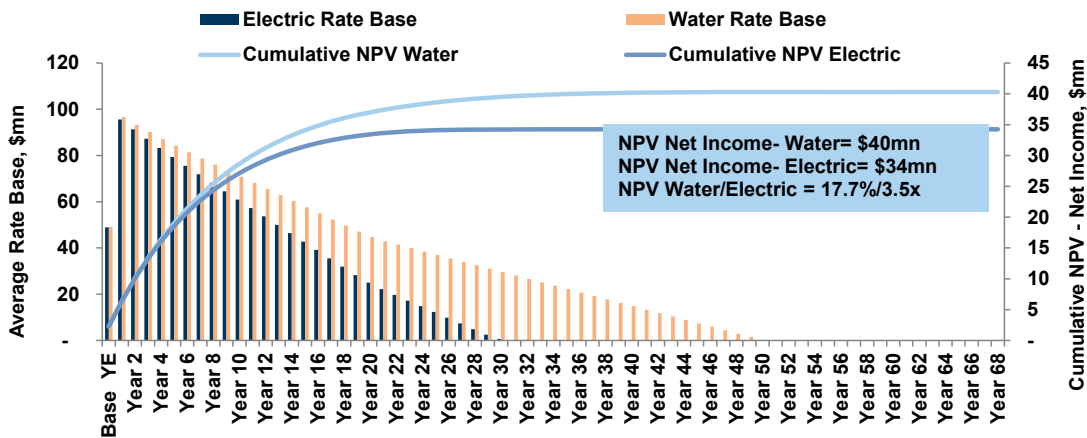
Source: Goldman Sachs Global Investment Research

Exhibit 28: We note the useful life for the average water asset is ~20 years higher than that for electric/gas assets...
Asset Useful life by Subsector



Source: Thomson Reuters

Exhibit 29: ...which extends the asset's earnings potential for every \$1 invested into regulated rate base...
Hypothetical average Rate Base/ Net Income (\$mn) assuming an initial investment of \$100mn and 30/50 yrs of useful life for an Electric/Water Utility

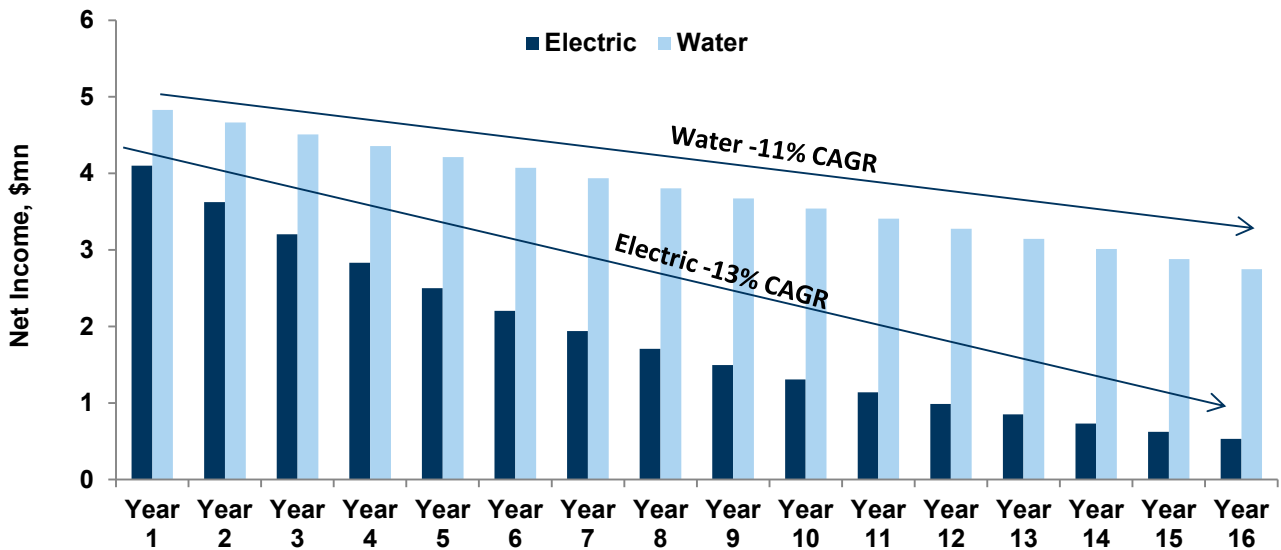


\$100mn initial investment used for illustrative purposes

Source: Goldman Sachs Global Investment Research

Exhibit 30: ...accounting for ~2% of incremental earnings CAGR for water vs electric...

Hypothetical average Rate Base/ Net Income (\$mn) assuming an initial investment of \$100mn and 30/50 yrs of useful life for an Electric/Water Utility

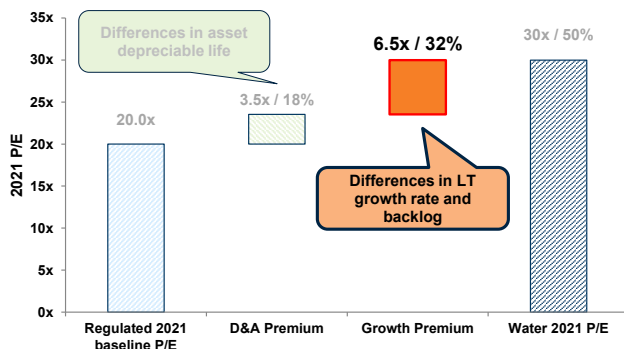


Source: Goldman Sachs Global Investment Research

2. Growth premium:

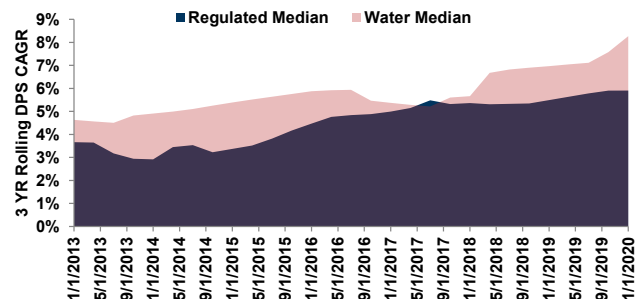
Even excluding the EPS advantage from D&A, we expect the water utility industry's significant investment backlog supporting continued above-average EPS growth (7% for water vs. 5% for electric) longer-term. We arrive at our 32%/6.5x premium based on a 15-year relative dividend-discount model (DDM), which we believe could prove conservative given AWWA's estimated \$1 trillion in water pipe replacement needs through 2035.

Exhibit 31: We justify the remaining 32% (6.5x) premium based on significant water pipe investment needs that should sustain water utilities' higher EPS growth profile versus electric utilities
GS 2020 Water baseline multiple



Source: Goldman Sachs Global Investment Research

Exhibit 32: Given water utilities' ~3% higher DPS CAGR versus other regulated utility peers...
3 yr Rolling DPS CAGR



Source: Company data, Goldman Sachs Global Investment Research, FactSet

Exhibit 33: ...we expect water utilities to continue growing EPS/DPS above other regulated utilities longer-term, even after excluding the D&A advantage

Growth premium for an average Water Utility based on DDM assuming a starting investment of \$10,000mn, $k_e=8\%$, LT growth rate $=4\%$ and tax rate $=26\%$

Year	Average Water Utility Dividend Growth rate (YR1-15 CAGR)	Water Dividend (mn)	Electric Dividend Growth rate (YR1-15 CAGR)	Electric Dividend (mn)
1	7.0%	\$255	5.0%	\$243
2	7.0%	\$273	5.0%	\$256
3	7.0%	\$291	5.0%	\$269
4	7.0%	\$310	5.0%	\$282
5	7.0%	\$331	5.0%	\$296
6	7.0%	\$352	5.0%	\$309
7	7.0%	\$375	5.0%	\$324
8	7.0%	\$400	5.0%	\$338
9	7.0%	\$427	5.0%	\$352
10	7.0%	\$459	5.0%	\$367
11	7.0%	\$493	5.0%	\$383
12	7.0%	\$530	5.0%	\$402
13	7.0%	\$570	5.0%	\$422
14	7.0%	\$612	5.0%	\$442
15	7.0%	\$657	5.0%	\$464
15+	4.0%	\$17,087	4.0%	\$12,058
NPV @ k_e 8%		\$8,671		\$6,556

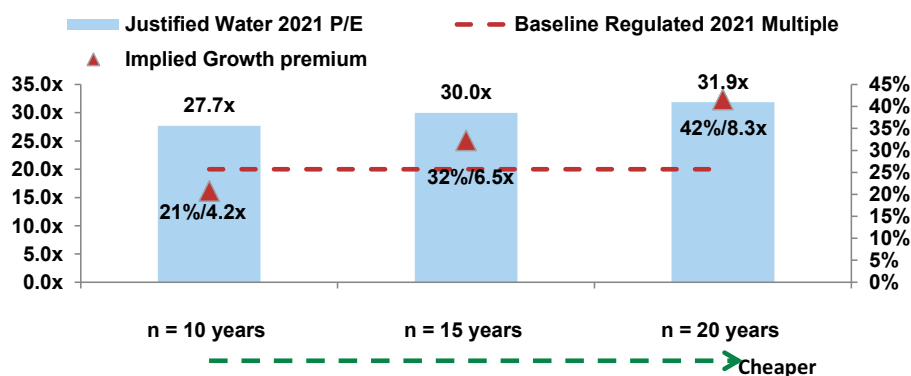
Implied Water Growth premium (post adjusting for D&A premium)
 $= \$8,671 / \$6,556$
 $\sim 32\% / 6.5x$

\$10,000mn starting amount selected for illustrative purposes; k_e , LT growth rate, and tax rate figures reflect normalized industry averages

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 34: We note that our base case of 15 years growth at 7% growth could prove conservative given long-term visibility of water investment needs

Justified Growth Premium for Water vs Regulated Electric assuming High Growth stage of 10/15/20 years



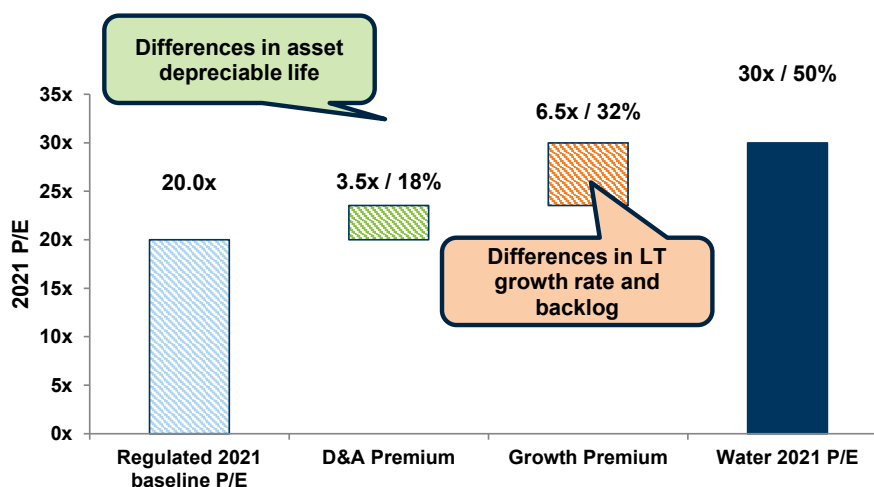
n= High growth years, LT growth rate $=4\%$

Source: Goldman Sachs Global Investment Research

Our revised 30.0x 2021 baseline multiple for water accounts for 3.5x/6.5x D&A/growth premium over the regulated baseline multiple of 20.0x.

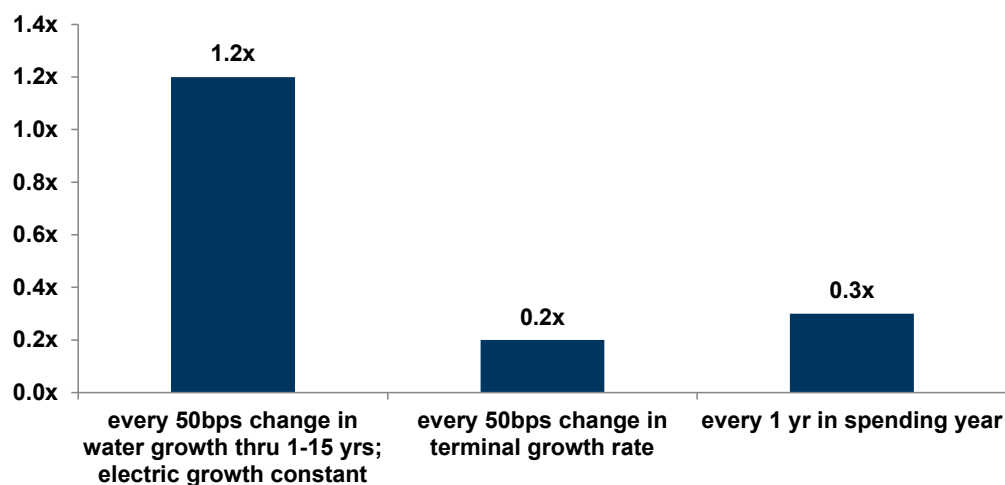
We note that our analysis solely focuses on the longer useful life of water assets and higher growth opportunities to explain the premium water valuations; however, we note that qualitative drivers mentioned in the prior section - scarcity, take-out potential, ESG focus - could apply an additional layer of premium.

Exhibit 35: Accordingly, our revised 30.0x 2021 baseline multiple for water accounts for 3.5x/6.5x D&A/growth premium over the regulated baseline multiple of 20.0x...
 Water 2021 baseline P/E vs Regulated



Source: Goldman Sachs Global Investment Research

Exhibit 36: ...while noting our analysis remains sensitive to changes in various assumptions
 Premium sensitivity to change in growth rate (yr 1-15), terminal growth rate and spending years

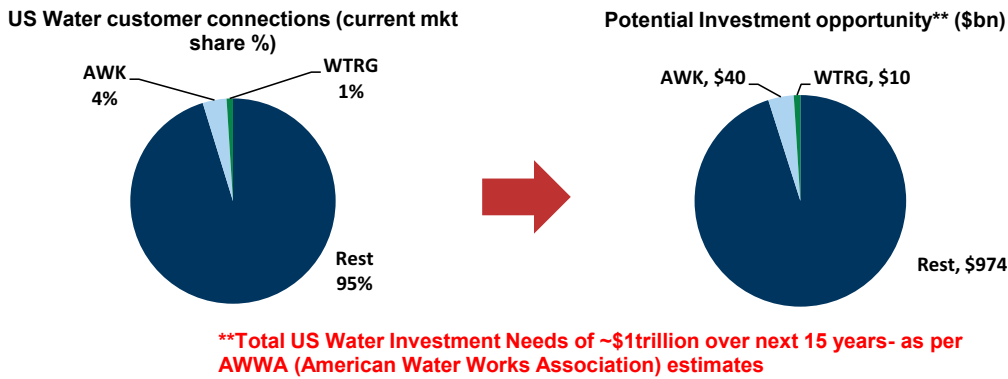


AWK/WTRG both stand to benefit from robust investment backlog

We see both AWK and WTRG able to sustain their robust water rate base growth outlook for at least the next 15 years. The AWWA's estimated \$1 trillion in water pipe replacement needs in the U.S. - through 2035 - could imply around \$40bn/\$10bn of investment backlog for AWK/WTRG based on their respective market share (by customer connections). Given \$13.7bn/\$5.0bn YE2019 rate base for AWK/WTRG, respectively, we believe these investments could support 3x/2x in rate base by 2035, or a 6.5%/4.9% rate base CAGR. While this growth rate alone could signal a slowing of earnings growth power, we note this does not account for additional rate base opportunities from ongoing municipal acquisitions or investments in new

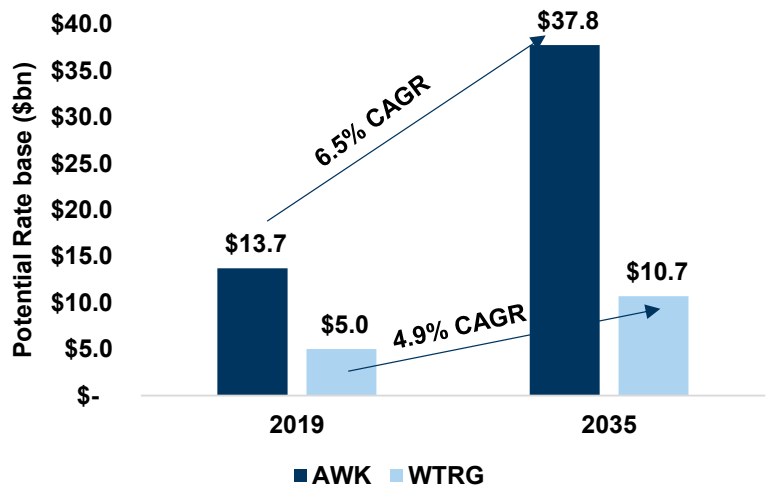
infrastructure, which we believe will continue to extend and expand organic investment opportunities. We view this long-term investment visibility as a key justifying factor for water utilities’ relative premium valuations.

Exhibit 37: We see meaningful pipe replacement needs for both AWK/WTRG long-term...
Potential Investment Opportunity



Source: Company data, Goldman Sachs Global Investment Research, AWWA

Exhibit 38: ... that could support potential rate base growth of 6.5%/4.9% through 2035 for AWK/WTRG, not including potential upside from municipal acquisitions or new infrastructure spend
AWK/WTRG Potential rate base through 2035



Source: Company data, Goldman Sachs Global Investment Research, AWWA

Upgrade AWK to Buy - Best-in-class growth, ESG-friendly profile justify premium

We view large-cap AWK's best-in-class 8.3% EPS growth, below-average beta, and its ESG-friendly profile as deserving of the highest premium valuation in our coverage universe and see 16% potential total return based on our \$146 price target.

AWK		12m Price Target: \$146		Price: \$127.24		Upside: 14.7%	
Buy		GS Forecast					
			12/19	12/20E	12/21E	12/22E	
Market cap: \$23.0bn	Revenue (\$ mn) New	3,610.0	3,800.8	3,992.0	4,175.0		
Enterprise value: \$33.1bn	Revenue (\$ mn) Old	3,610.0	3,800.8	3,992.0	4,175.0		
3m ADTV :\$187.1mn	EBITDA (\$ mn)	1,752.0	1,947.1	2,097.8	2,240.3		
United States	EBIT (\$ mn)	1,170.0	1,335.6	1,443.7	1,544.3		
America-Regulated Utilities:	EPS (\$) New	3.61	3.88	4.24	4.58		
	EPS (\$) Old	3.61	3.88	4.24	4.58		
M&A Rank: 3	P/E (X)	31.3	32.8	30.0	27.8		
	Dividend yield (%)	1.7	1.7	1.9	2.0		
	Net debt/EBITDA (X)	5.4	5.2	5.0	4.7		
		12/19	3/20E	6/20E	9/20E		
	EPS (\$)	0.73	0.76	0.97	1.38		

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 13 Apr 2020 close.

Source: Goldman Sachs Global Investment Research

We upgrade AWK from Neutral to Buy given 1) continued best-in-class earnings and dividend growth in our coverage universe, 2) long-term visibility of above-average growth from organic investments and municipal system acquisitions, 3) its ESG-friendly status as the only large-cap pure-play water utility, and 4) our updated target multiple and premium that imply a 16% total return.

We see a long runway of water infrastructure investment opportunities that should sustain AWK's above-average growth. The aging water and wastewater infrastructure in the United States is in need of replacement and modernization. In addition, increased regulation related to water quality and the management of water and wastewater residual discharges are also primary drivers for the need to modernize the country's water and wastewater infrastructure. We note AWK is well positioned to benefit from ~\$40bn in potential investment over the next 15 years, given the company's ~4% market share (based on customers served) and AWWA's estimated \$1 trillion in water investment needs. AWK already plans to invest almost \$20 billion to the regulated utilities (pipe replacement, system upgrades) over the next 10 years, sustaining its 7-8% rate base CAGR target longer-term.

We expect municipal acquisitions continue to provide an additional growth layer.

As mentioned in the previous sections, the water utility space is very fragmented, with the bulk of the customers in the U.S. still served by municipal utilities. With the majority of AWK's utility jurisdictions allowing fair market value (FMV) treatment for municipal acquisitions, we expect the company to continue its consistent acquisition track record

that should contribute 1-2% of the 7-10% EPS CAGR guided range. Along with the inherent financial advantages of FMV, we note that acquisitions add incremental infrastructure investment opportunities to bolster AWK's rate base growth longevity.

AWK carries a stable balance sheet, improving through 2022. While we acknowledge AWK's relatively high ~60% debt/cap levels, management at the recent investor day announced plans to issue \$500mn of equity at around the mid-point of the 2020-2024 investment plan. Our model continues to embed the \$500mn issued by YE2022, resulting in a 58% debt/cap in 2022, and an improvement in FFO/debt from 15% in 2020 to 17% in 2022. Based on the current A/Baa1 credit rating, we do not anticipate any additional equity needs beyond the guided levels.

We keep our EPS estimates unchanged at \$3.88/\$4.24/\$4.58 for 2020-2022 and see EPS growing at 8.3% CAGR from 2019-2022, at the mid-point of the company's 7-10% guidance range, contributed by 7-8% from regulated utilities and 1% from the market based business. Primary drivers of growth continue to include robust capital investments, customer growth (both organic and via municipal acquisitions), O&M management, with some dilution in 2022 from the \$500mn equity issuance. We continue to assume 10% annual dividend through 2022, resulting in a 55%-57% payout.

We raise our 12-month price target to \$146 (from \$134 previously) derived using a 34.5x 2021E P/E multiple (vs 31.5x prior). Our revised P/E multiple incorporates our new water base P/E multiple of 30.0x (calculated in prior sections), as well as a 3x (10%) premium to account for AWK's above-average growth and favorable ESG profile. While the water utility peer group is fairly limited, AWK is currently trading at a 30.0x P/E on 2021E, largely in-line with peers. We believe AWK should trade at the highest multiple among water utilities and relative to our overall coverage universe.

Key downside risks include 1) water quality issues that result in customer health risks, leading to significant financial and regulatory impact, 2) inability to consistently manage operating costs, 3) unfavorable turn in regulatory environment that negatively impacts robust earnings growth potential, 4) lower-than-expected growth at the non-regulated segments, which lowers AWK's best-in-class growth rate, and 5) reduced ESG fund flows that impact further multiple expansion as investors turn to other qualifying investments.

Exhibit 39: We keep our EPS estimates unchanged at \$3.88/\$4.24/\$4.58 for 2020-2022 ...

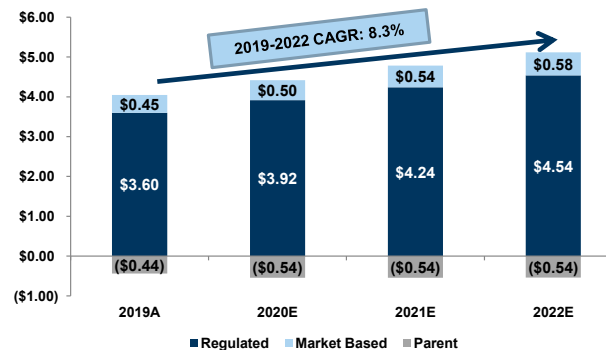
GS new vs. old vs. consensus, 2019E-2022E

	EPS Estimates			% Difference	
	New	Old	Consensus	vs Old	vs Consensus
2020E	\$3.88	\$3.88	\$3.85	0%	1%
2021E	\$4.24	\$4.24	\$4.23	0%	0%
2022E	\$4.58	\$4.58	\$4.56	0%	0%

Source: Goldman Sachs Global Investment Research, FactSet

Exhibit 40: ...reflecting 8.3% growth CAGR over 2019-2022...

EPS by segment, 2019A-2022E



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 41: We raise our TP to \$146 using a 34.5x P/E multiple (vs 31.5x previously) using our revised base water multiple and a growth/ESP premium...

AWK Valuation

AWK Valuation

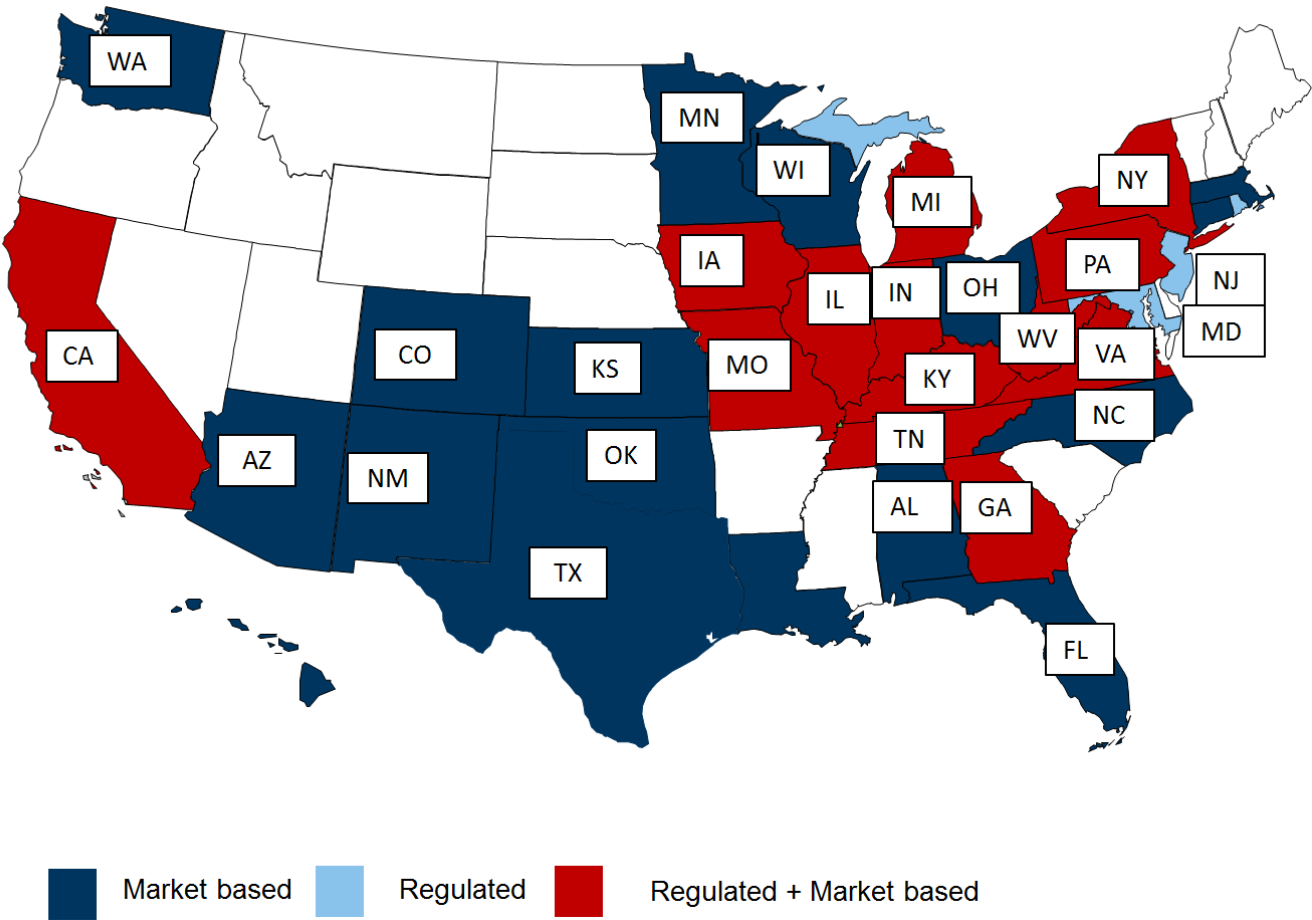
AWK 2021 EPS	\$4.24
GS Water Utility Base Multiple	30.0x
Premium / (Discount)	4.5x
Adjusted P/E	34.5x
Utility Valuation	\$146

AWK Valuation	\$146
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Current Stock Price	\$127.24
Price Return Potential	14.7%
Dividend Yield	1.4%
Total Return Potential	16%

Source: Goldman Sachs Global Investment Research

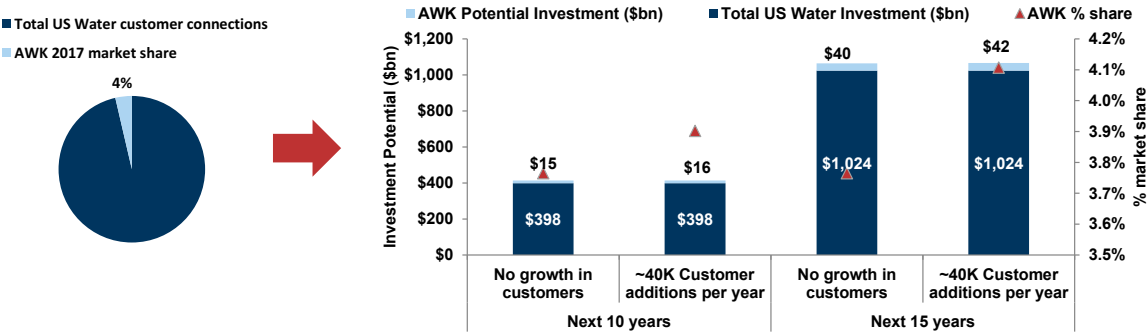
Exhibit 42: We see an impressive growth pipeline for AWK given its Regulated business presence in 16 U.S. states providing water and wastewater utility services to residential, commercial, industrial customers...
AWK Geographical footprint



*sale of NY Utility announced in 2019, currently not factored in our estimates

Source: Company data, Goldman Sachs Global Investment Research

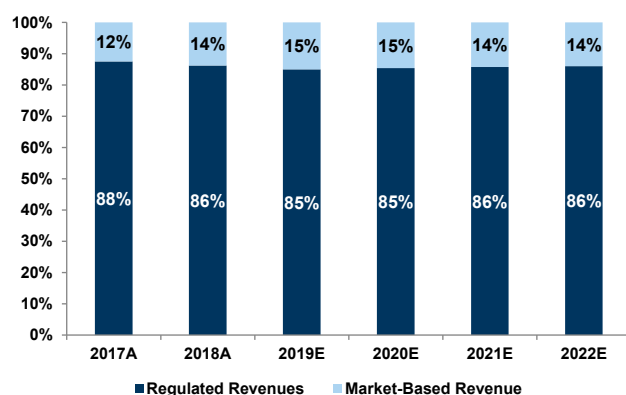
Exhibit 43: ...and potential investment opportunity of ~\$40bn over the next 15 years with potential upside from organic/inorganic customer additions.
AWK Potential Investment Opportunity



Source: Company data, Goldman Sachs Global Investment Research, AWWA

Exhibit 44: In addition to American Water's core regulated franchise, AWK owns and operates complementary water-related businesses with medium to long-term contracts, with low capital requirement fueling positive cash contribution

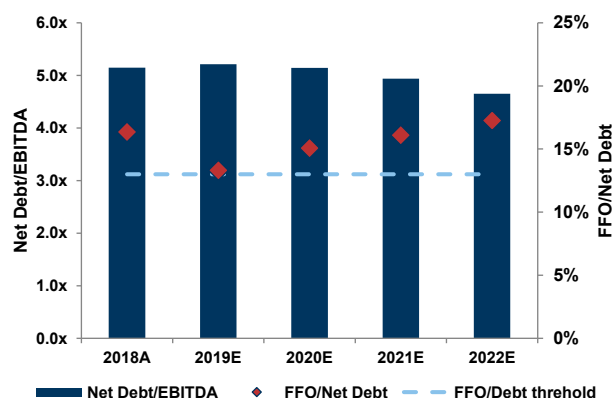
Regulated vs Unregulated Revenue mix (%)



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 46: We see FFO/debt improving through 2022, aided by \$500mn of equity issuances across 2021-2022...

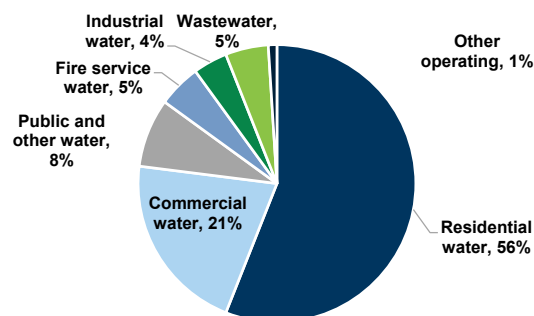
Net Debt/ EBITDA & FFO/Debt 2018A-2022E



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 45: AWK's regulated revenue base consists of 56% residential, 21% commercial and just 4% industrial

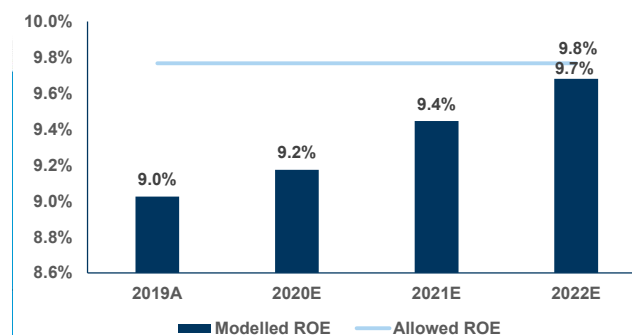
AWK Regulated Operating Revenue by customer class



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 47: ...and with AWK earning close to allowed by 2022

Earned vs Allowed ROE 2019A-2022E



Source: Company data, Goldman Sachs Global Investment Research

Company Overview

American Water Works (AWK), remains the largest publicly traded US water utility at more than \$24bn in market cap, provides more than 14 million people with drinking water, wastewater and water-related services in almost 45 US states and 2 Canadian provinces. The company operates two divisions: (1) the Regulated segment, representing 86% of 2019 revenues and (2) the Market Based Operations segment, which comprises the remaining 14%. The key states served by AWK's regulated utilities are summarized in Exhibit 48.

Exhibit 48: AWK's regulated segment exposure is distributed across sixteen states with bulk of earnings from seven states

State utility commission regulatory snapshot

AWK Regulatory Profile							
	New Jersey	Pennsylvania	Missouri	Illinois	California	Indiana	West Virginia
Commission Name	New Jersey Board of Public Utilities	Pennsylvania Public Utility Commission	Missouri Public Service Commission	Illinois Commerce Commission	California Public Utilities Commission	Indiana Utility Regulatory Commission	Public Service Commission of West Virginia
No. of Commissioners	5 of 5 (3 D, 2 R)	5 of 5 (3 D, 2 R)	5 of 5 (2 D, 3 R)	5 of 5 (1 D, 2 R, 2 Non-Partisan)	5 of 5 (5 D)	5 of 5 (3 D, 2 R)	3 of 3 (2 R, 1 D)
Test year for Rate Case	Historical test year	Future test year	Historical test year	Future test year	Future test year	Future test year	Historical test year
Infrastructure replacement surcharges	Yes	Yes	Yes	Yes	No	Yes	Yes
Revenue Stability mechanisms	No	No	No	Yes	Yes	No	No
Expense mechanisms	Yes	Yes	Yes	Yes	Yes	No	No
Utility plant recovery mechanisms	No	Yes	No	Yes	Yes	No	No
GS view on Regulation	Somewhat Restrictive	Constructive	Somewhat Restrictive	Constructive	Balanced	Somewhat Restrictive	Restrictive
Fair Market Legislation (FMV)	Yes	Yes	Yes	Yes	Yes	Yes	No
Company 2018 Revenue Exposure	AWK-24%	AWK-23%	AWK-10%	AWK-10%	AWK-7%	AWK-7%	AWK-5%

Infrastructure Replacement surcharges: Allows rates to change periodically, outside a general rate case proceeding, to reflect recovery of capital investments made to replace infrastructure necessary to sustain safe, reliable services for our customers. These mechanisms typically involve periodic filings and reviews to ensure transparency.

Utility plant recovery mechanisms: Allows recovery of the full return on utility plant costs during the construction period, instead of capitalizing an allowance for funds used during construction. In addition, some states allow the utility to seek pre-approval of certain capital projects and associated costs. In this pre-approval process, the PUC may assess the prudence of such projects.

Expense mechanisms: Allows changes in certain operating expenses, which may fluctuate based on conditions beyond the utility's control, to be recovered outside of a general rate case proceeding or deferred until the next general rate case proceeding.

Revenue stability mechanisms: Separates a utility's cost recovery from the amount of water it sells to recover its fixed costs and ongoing infrastructure investment needs. Such a mechanism adjusts rates periodically to ensure that a utility's revenue will be sufficient to cover its costs, regardless of sales volume, including recognition of declining sales resulting from reduced consumption, while providing an incentive for customers to use water more efficiently.

Future test year: A test period used for setting rates, which begins with the date new rates are effective. This allows current or projected revenues, expenses and capital investments to be collected on a timelier basis.

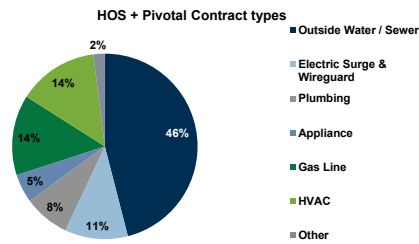
Fair Market Legislation (FMV): Allows regulated water companies to pay a fair market value for the purchase of water and wastewater systems. Before these changes, system values were determined by their depreciated original cost, which generally did not reflect a reasonable market value for those assets and became a barrier to a sale.

Source: SNL Financial, Company reports, Goldman Sachs Global Investment Research

In addition to American Water's core regulated franchise, AWK owns and operates complementary water-related businesses as part of its Market-based segment which include:

The Homeowner Services Group- which provides warranty protection programs to residential and smaller commercial customers to protect against repair costs for interior and exterior water and sewer lines, interior gas and electric lines, heating and cooling systems, water heaters and other home appliances, as well as power surge protection and other related services. The current portfolio includes the June 2018 acquisition of Pivotal Home Solutions, which increased the segment's customer base from 0.9mn to 1.5mn. The company also partners with municipalities, utilities and other organizations to offer protection programs to customers serviced by, or affiliated with, those municipalities, utilities and organizations. The term of these partnership agreements is typically three to five years, with mutual optional renewals; each customer generates around \$20-\$40mn of net income for this segment, which reflects around half or more of AWK's 14% market-based earnings. As of YE2019, the Homeowner Services Group had approximately 3 million customer contracts in 43 states.

Exhibit 49: The Homeowner Services Group houses ~3 million contracts in 43 states, with a potential market opportunity of 30mn contracts...
Homeowner services business profile



What Does Winning a New HOS Contract Mean to Net Income Growth?

1) Penetration Rate	2) # Contracts/ Homeowner	3) Net Income per Contract*
<ul style="list-style-type: none">With Billing: 15%-40%Without Billing: 1%-15%	<ul style="list-style-type: none">2 contracts on average	<ul style="list-style-type: none">Average: \$8-\$12 per contract

* Assumes annualized over 5 year period

Hypothetical Net Income Contribution Calculation

"American Water Resources received notice of intent by the City X Utilities Commission to be awarded an exclusive home warranty protection agreement for 200,000 homeowners."

$$200,000 \times 15\% \times 2 \times \$8-\$12 = \$480,000-\$720,000$$



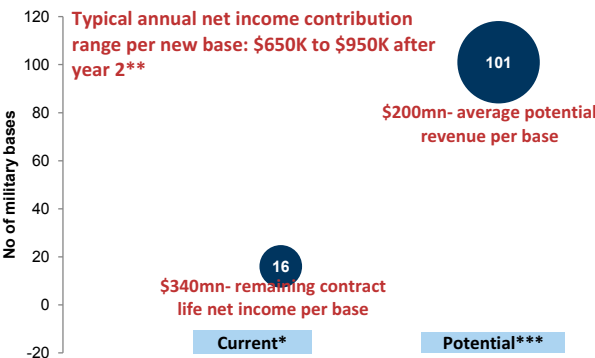
Source: Company data, Goldman Sachs Global Investment Research

Military Services Group - provides water and wastewater services to the U.S. government on military installations; operates on 16 military installations under 50-year contracts with the U.S. government as part of its Utility Privatization Program. The scope of these contracts generally includes the operation and maintenance of the installation's water and wastewater systems and a capital program focused on asset replacement and, in certain instances, systems expansion. The backlog of revenue associated with the current U.S. government contracts is approximately \$4.3 billion, with an average remaining contract term of 42 years.

Exhibit 50: The Military Services Group generates stable revenues via 30-50 year contracts, with significant market expansion opportunities
Military services business profile

	Contract	Division	Contract Years remaining
1	Fort Sill	Army	35
2	Fort Leavenworth	Army	35
3	Fort Rucker	Army	36
4	Fort AP Hill	Army	39
5	Scott AFB	Air Force	39
6	Fort Hood	Army	40
7	Fort Polk	Army	40
8	Fort Belvoir	Army	41
9	Fort Meade	Army	42
10	Hill AFB	Air Force	46
11	Picatinny Arsenal	Army	46
12	Vadenberg AFB	Air Force	48
13	Wright- Patterson AFB	Air Force	50
14	Fort Leonard Wood	Army	50

2 more added in 2018-2019 as per latest 10K



*as per 2019 10K, ** as per Dec 2019 analyst presentation, ***as per Dec 2015 presentation

Source: Company data, Goldman Sachs Global Investment Research

Initiate WTRG at Neutral – Robust water/gas growth already reflected in SOTP

While we see Aqua's recent acquisition of Peoples Gas providing upside to rate base and EPS growth longer-term, we view current valuations fairly crediting this growth in addition appropriately reflecting the company's water/gas utility mix (versus pure-play water prior). Our \$45 price target implies an 7% total return versus 15% for Regulated Utilities.

WTRG	12m Price Target: \$45	Price: \$42.8	Upside: 5.1%		
Neutral	GS Forecast				
		12/19	12/20E	12/21E	12/22E
Market cap: \$9.2bn	Revenue (\$ mn) New	889.7	1,619.4	2,052.0	2,167.9
Enterprise value: \$14.9bn	Revenue (\$ mn) Old	--	--	--	--
3m ADTV :\$68.6mn	EBITDA (\$ mn)	521.4	815.6	1,028.4	1,122.2
United States	EBIT (\$ mn)	360.8	581.1	731.8	799.9
America-Regulated Utilities:	EPS (\$ New)	1.47	1.56	1.65	1.78
	EPS (\$ Old)	--	--	--	--
M&A Rank: 3	P/E (X)	27.6	27.5	26.0	24.0
	Dividend yield (%)	2.2	2.2	2.4	2.6
	Net debt/EBITDA (X)	2.3	7.0	6.2	6.2
		12/19	3/20E	6/20E	9/20E
	EPS (\$)	0.29	0.57	0.17	0.27

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 13 Apr 2020 close.

Source: Goldman Sachs Global Investment Research

We initiate coverage on Essential Utilities, Inc. (WTRG) - formed by the merger of Aqua America and Peoples Gas - at Neutral with a 12-month price target of \$45.

We view the 9+ % combined rate base growth (including municipal acquisitions) driving a robust 6.6% EPS CAGR from 2019A-2022E. However, we view current valuation already reflecting these positive qualities, with just 7% total return based on our water/gas SOTP price target, versus 15% for Regulated Utilities.

Peoples Gas acquisition provides additional growth...

Peoples Gas acquisition elevates rate base growth profile. We see 10%+ rate base growth at Peoples Gas from 2019A-2022E primarily driven by long-term visibility of pipeline replacement projects. We note that Peoples has identified more than 2,700 miles of bare steel and cast iron pipe to be replaced under its Long-term Infrastructure Improvement Plan (LTIIP) by 2034 in its PA service territory, which at ~180-200 miles/year of pipe replacement, implies more than 15 years of increased capital spending to support around 9% rate base CAGR during the period. Along with the majority of these investments eligible for distribution system improvement charge (DSIC) that help reduce regulatory lag, we expect Peoples Gas to benefit from favorable tax election, as detailed below.

Tax repairs election should help maintain robust EPS growth while providing incremental funding for investments. WTRG plans to elect tax repairs for Peoples

Gas' PA utility, which comprises more than 90% of the gas customer base. **What is tax repair?** It essentially allows the company to expense certain utility asset improvement costs that were previously capitalized and depreciated for book and tax purposes. For PA, which allows flow-through accounting, the utility is able to keep the incremental earnings and cash from the lower tax rate (still collected in customer bills at the higher tax rate), supporting financing needs while reducing rate case cycles. We note WTRG's PA water utility elected tax repairs in 2012 (now expired), which enabled it to record robust earned ROEs while staying out of a rate case for almost 10 years. For the gas utility, we expect WTRG to allocate qualified assets over a longer investment period, reducing the sudden jump in earnings growth recorded when implemented for the water utility. Our model embeds ~10.5% earned ROEs for Peoples Gas through 2022 versus 10.2% allowed, reflecting the tax repairs benefit.

We expect merger synergies to benefit EPS through 2022. With the bulk of the Peoples Gas service jurisdictions - Pennsylvania - sitting on top of Aqua America's PA water utility area, we expect the combined company to benefit from merger synergies related to various operations and system integration. Our model embeds 5% of combined O&M as acquisition synergies, resulting in flat to 1% O&M CAGR from 2019A-2022E for both water and gas utilities.

...to a fundamentally robust water growth story

We expect combined 9.7% water rate base CAGR (including acquisitions) from 2019-2022 driven by a robust organic capital program...

The water sector is extremely capital intensive, given its extensive pipe and main infrastructure system as well as treatment facilities, storage facilities, dams, wells and pumps. As shown in Exhibit 37, the American Water works Association's (AWWA), most recent estimates about \$1 trillion will be needed in the next 15 years to upgrade the country's water systems, both public and private, to meet environmental standards. At the Water business, we expect ~\$400-\$500mn in capital spending each year underlying the company's 7% rate base growth CAGR.

...as well as growth via municipal transactions supported by FMV legislation.

Given the fragmented nature of the water utility industry, as detailed in the prior sections of this note, we expect WTRG to continue its robust municipal acquisition strategy to support and sustain its growth. The vast majority of WTRG's jurisdictional states currently allow fair market value (FMV) accounting that should provide continued incentive for acquisitions. In 2018, Essential Utilities closed 6 municipal acquisitions, adding more than 13,700 customers and more than \$100 million of rate base. In September 2019, the company entered into a purchase agreement to acquire the wastewater utility system assets of the Delaware County Regional Water Quality Control Authority ("DELCORA"), which consists of approximately 16,000 customers in 42 municipalities in Southeast Pennsylvania for \$276,500. If approved by the Pennsylvania Public Utilities Commission (PUCO), this acquisition would be the largest water and wastewater deal in state history. We note that every \$100 million in rate base from acquisitions that are added through municipals contributes ~\$5 million in earnings, or \$0.02 in EPS.

Relatively stable balance sheet, although somewhat levered given Peoples acquisition

Following the Peoples Gas acquisition, we see WTRG maintaining around 50% debt/cap through 2022, along with FFO/debt at ~12% during the period. We note S&P's "A" issuer credit rating targets FFO/debt to remain at or above 12% longer-term, with sustained lower levels a potential risk for a downgrade. In addition, we note around 25-30% of debt resides at the parent, somewhat elevated in our view. However, we believe a one-notch credit downgrade would still place WTRG's rating around the utilities average; we do not see this as a meaningful risk.

Will ESG momentum continue post gas integration?

In recent years, the water industry has seen increased interest from ESG investors contributing to a significant expansion of water premium vs the average electric/gas multiple. During the period from 2014 to 2017, water utilities traded at an 11% to 28% premium to the regulated group. This premium expanded in 2018 and 2019 with the water premium currently at a 58% premium to the average regulated multiple. WTRG's premium also expanded from 19% in 2017 to 34% in 2019. However, we believe that a change in WTRG's profile from a pure play water utility to a gas/water utility could prove to be a headwind to this premium expansion going forward, in addition to investors' utilization of a more SOTP valuation approach (utilized in deriving our price target).

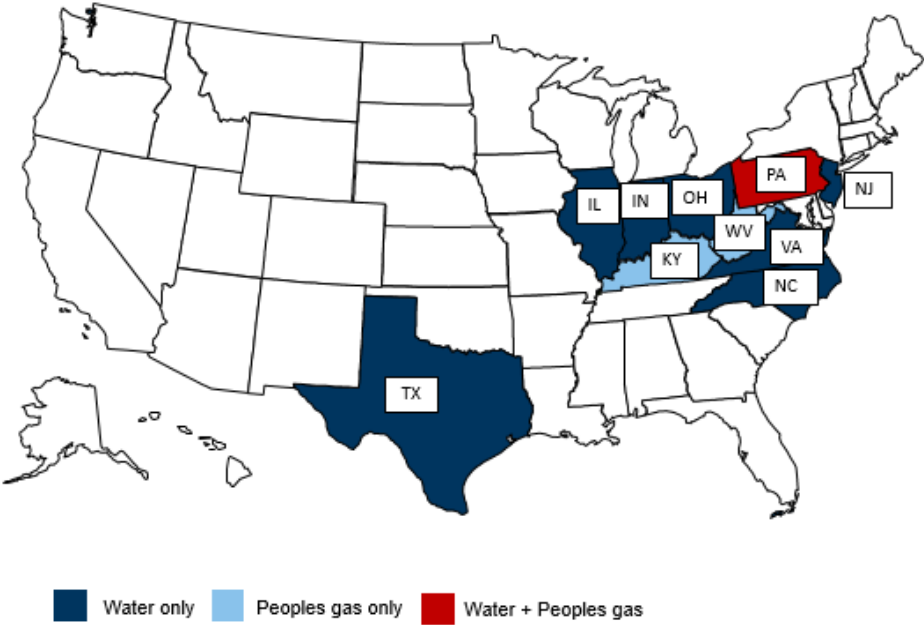
Robust growth largely priced in - Initiate Neutral

Our \$45, 12-month price target is based on an SOTP valuation methodology. Our 2020-2022E EPS estimates of \$1.56/\$1.65/\$1.78 reflects a 6.6% CAGR from 2019-2022E, with potential upside to growth beyond 2022 as WTRG reduces regulatory lag on both organic investments as well as added rate base from municipal acquisitions. To arrive at our SOTP-based price target, we apply our new 30x base water target P/E multiple to 2021E EPS for the water utility segment, along with a 22x P/E multiple to 2021E EPS for the gas utility segment. Our gas multiple reflects a 10% (or 2x) premium to our 20x base gas target P/E, which reflects above-average rate base and EPS growth, as well as our constructive view of PA regulation (which makes up over 90% of the gas utility customer base).

We view WTRG's current valuation as fairly representing the company's water/gas utility mix, with our \$45 target reflecting a 27.3x P/E, a discount our 30x base water target P/E for pure-play water utilities like AWK. **Upside risks to our call** include: 1) Peoples Gas acquisition synergies exceed our expectations, elevating EPS growth profile, 2) tax repairs election for the PA gas utility elevates earned ROEs even above our estimate, and 3) WTRG continues to benefit from ESG fund flows, despite its water/gas utility mix profile on a pro-forma basis. **Downside risks to our call** include: 1) PA regulation turns less constructive, 2) growth from municipal acquisitions slows, and 3) WTRG credit rating is downgraded.

Exhibit 51: Essential Utilities is a Pennsylvania-based water and natural gas infrastructure company with a 10 state footprint...

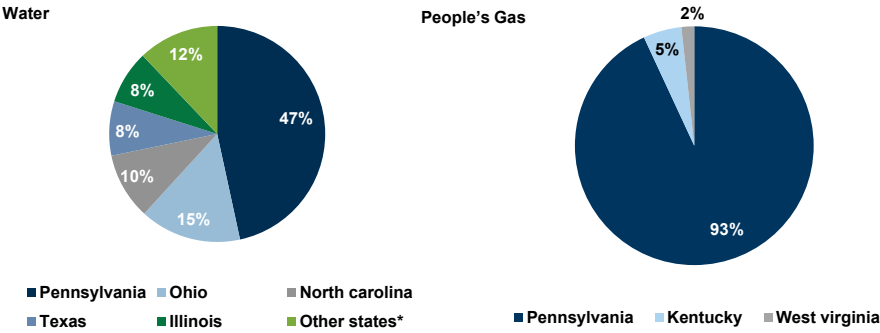
Water + People’s Gas Operating states for combined Essential Utilities



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 52: ... with combined 1.7 million regulated customers (1mn - water + 0.7mn gas), with PA as the biggest jurisdiction

Customer distribution across states Aqua + People’s Gas

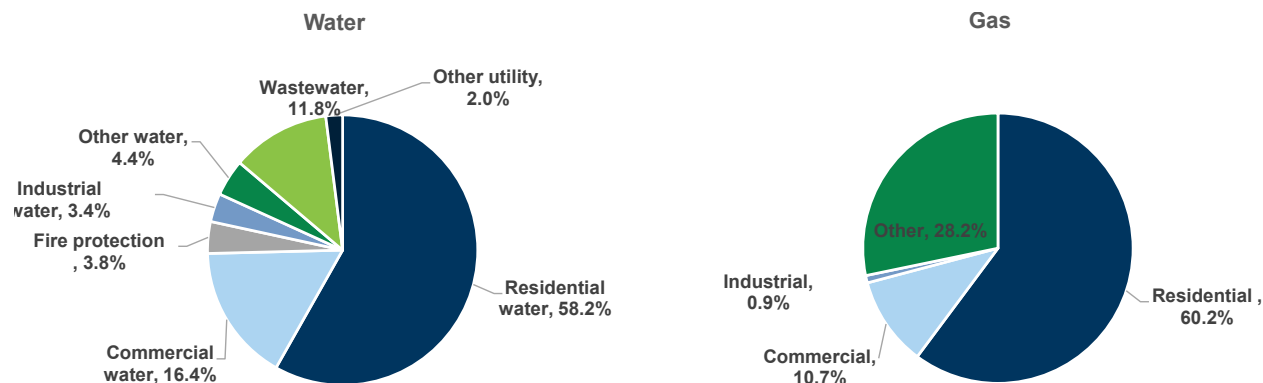


* Other states include New Jersey, West Virginia and Indiana

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 53: Residential revenues make up the bulk of both water and gas revenues...

Operating Revenue (2019) mix at the water/gas business by customer type



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 54: ... situated largely in constructive or balanced regulatory jurisdictions, especially its largest utility in PA.

State utility commission regulatory snapshot

WTRG Regulatory Profile							
	Pennsylvania	Ohio	Illinois	Texas	North Carolina	Kentucky	West Virginia
Commission Name	Pennsylvania Public Utility Commission	Public Service Commission of Ohio	Illinois Commerce Commission	Public Service Commission of Texas	North Carolina Utilities Commission	Kentucky Public Service Commission	Public Service Commission of West Virginia
No. of Commissioners	5 of 5 (3 D, 2 R)	5 of 5 (1 D, 2 R, 2 Non-Partisan)	5 of 5 (1 D, 2 R, 2 Non-Partisan)	3 of 3 (3 R)	4 of 7 (3 D, 1 R)	3 of 3 (3 R)	3 of 3 (2 R, 1 D)
Test year for Rate Case	Future test year	Historical test year	Future test year	Historical test year	Historical test year	Historical test year	Historical test year
Infrastructure replacement surcharges	Yes	Yes	Yes	No	Yes	Yes	Yes
Revenue Stability mechanisms	No	No	Yes	No	No	No	No
Expense mechanisms	Yes	Yes	Yes	Yes	Yes	Yes	No
Utility plant recovery mechanisms	Yes	No	Yes	No	No	Yes	No
DSIC Mechanism (applicable to Gas business)	Yes	NA	NA	NA	NA	Yes**	No
GS view on Regulation	Constructive	Balanced	Constructive	Somewhat Restrictive	Balanced	Balanced	Restrictive
Fair Market Legislation (FMV)	Yes	Yes	Yes	Yes	Yes	No	No
Company 2018 Revenue Exposure % of total customers	Water-53%; Peoples Gas*-93%	Water-13%	Water-9%	Water-9%	Water-7%	Peoples Gas*- 5%	Peoples Gas*- 2%

Infrastructure Replacement surcharges: Allows rates to change periodically, outside a general rate case proceeding, to reflect recovery of capital investments made to replace infrastructure necessary to sustain safe, reliable services for our customers. These mechanisms typically involve periodic filings and reviews to ensure transparency.

Utility plant recovery mechanisms: Allows recovery of the full return on utility plant costs during the construction period, instead of capitalizing an allowance for funds used during construction. In addition, some states allow the utility to seek pre-approval of certain capital projects and associated costs. In this pre-approval process, the PUC may assess the prudence of such projects.

Expense mechanisms: Allows changes in certain operating expenses, which may fluctuate based on conditions beyond the utility's control, to be recovered outside of a general rate case proceeding or deferred until the next general rate case proceeding.

Revenue stability mechanisms: Separates a utility's cost recovery from the amount of water it sells to recover its fixed costs and ongoing infrastructure investment needs. Such a mechanism adjusts rates periodically to ensure that a utility's revenue will be sufficient to cover its costs, regardless of sales volume, including recognition of declining sales resulting from reduced consumption, while providing an incentive for customers to use water more efficiently.

Future test year: A test period used for setting rates, which begins with the date new rates are effective. This allows current or projected revenues, expenses and capital investments to be collected on a timelier basis.

Distribution System improvement Charge ("DSIC") mechanism: Utilities are allowed to recover costs related to repair, replacement or improvement of eligible distribution property that has not previously been reflected in rates or rate base. Through a DSIC, subject to an earnings test, a utility may recover the fixed costs of eligible infrastructure incurred during the three months ended one month prior to the effective date of the charge, thereby reducing the historical regulatory lag associated with cost recovery through the traditional rate-making process.

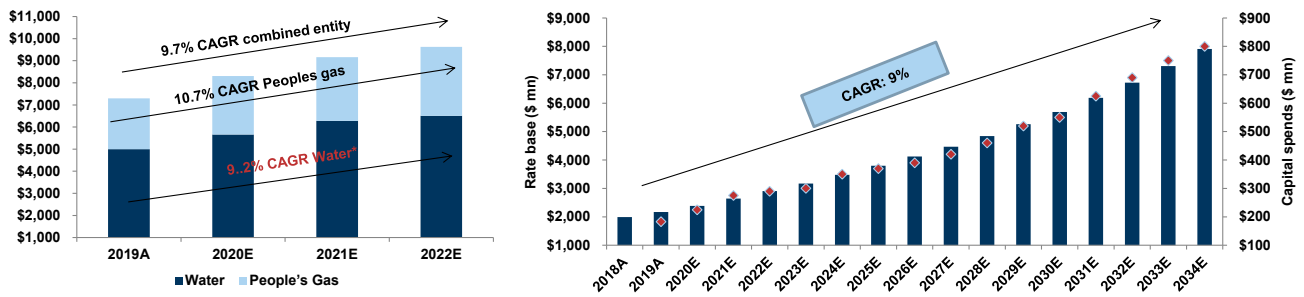
Fair Market Legislation(FMV): Allows regulated water companies to pay a fair market value for the purchase of water and wastewater systems. Before these changes, system values were determined by their depreciated original cost, which generally did not reflect a reasonable market value for those assets and became a barrier to a sale.

**In Kentucky, Delta has a pipe replacement program tariff, which allows adjustment of regulated rates annually to earn a return on capital expenditures incurred subsequent to Delta's last rate case which are associated with the replacement of bare steel and vintage plastic pipe.

Source: SNL Financial, Company reports, Goldman Sachs Global Investment Research

Exhibit 55: We expect WTRG to achieve 9.7% rate base CAGR from 2019-2022E across its utilities, with potential to sustain this level over the next 15 years based on organic investments and municipal acquisitions...

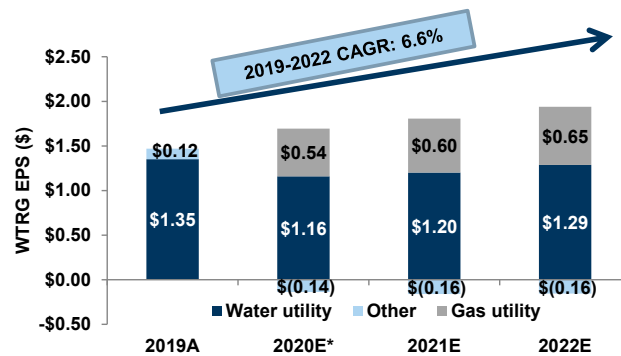
Rate base (\$mn) 2019A-2022E



*includes \$50mn/\$75mn of capital in 2021/2022 at DELCORA

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 56: ...although we expect earnings growth to lag rate base growth at a larger rate through 2022 given acquisition earnings lag and water utilities transition away from tax repairs...
EPS 2019A-2022E

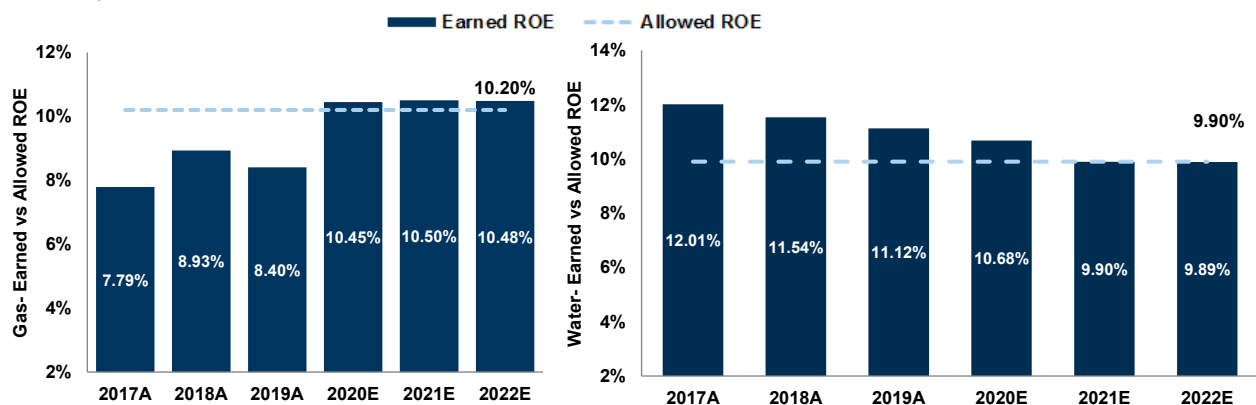


*2020 incorporates full-year of Peoples Gas earnings, comparable versus adjusted proforma company guidance ; 2021 summation for WTRG off by \$0.01 due to rounding issue

Source: Goldman Sachs Global Investment Research, Company data

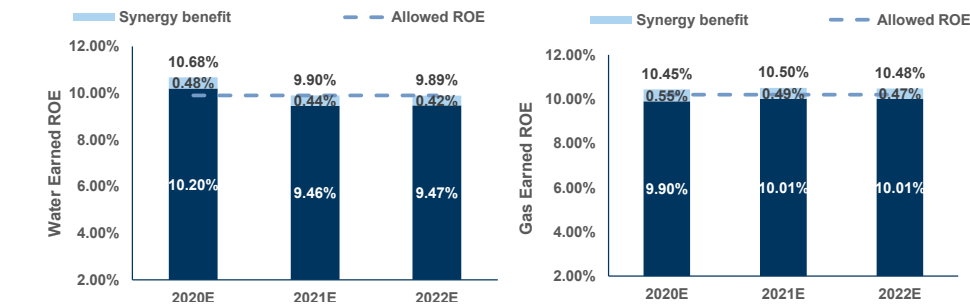
Exhibit 57: We model modest over-earning at gas utilities from expected PA tax repair benefits, versus closed to allowed ROE for water utilities after transitioning to more traditional ratemaking...

Water & Gas Utility Earned vs Allowed ROE



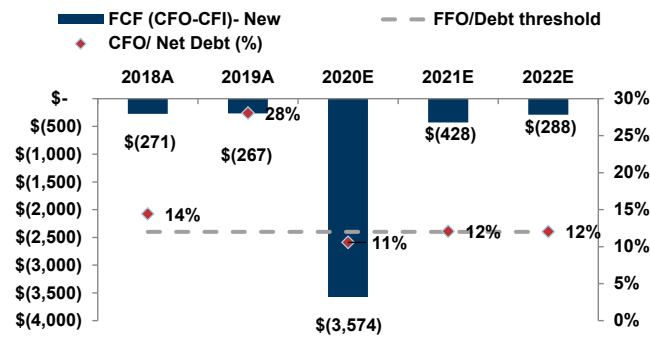
Source: Company data, Goldman Sachs Global Investment Research

Exhibit 58: ...also supported by assumed Aqua-Peoples acquisition synergies.
Earned ROEs including and excluding merger synergies 2020E-2022E



Source: Goldman Sachs Global Investment Research

Exhibit 59: We expect FCF levels to improve post acquisition financing, with FFO/debt near target threshold levels for its “A” rating by S&P
FCF (CFO-CFI \$mn) & CFO/Net Debt (%)



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 60: Our EPS estimates are largely in line with consensus through 2022...
GS New vs Consensus

	EPS Estimates		% Difference vs Consensus
	New	Consensus	
2019A	\$1.47	\$1.47	0%
2020E	\$1.56	\$1.57	-1%
2021E	\$1.65	\$1.65	0%
2022E	\$1.78	\$1.77	1%

Source: Goldman Sachs Global Investment Research, FactSet

Exhibit 61: Our SOTP-based \$45 price target reflects a 7% total return versus 15% for Regulated Utilities...

WTRG SOTP Valuation

VALUATION

Water utility EPS 2021	1.20
Water utility multiple	30.00x
Assumed premium	0.00x
Adjusted P/E	30.0x

Water utility valuation	36.08
--------------------------------	--------------

Gas utility EPS 2021	0.60
Gas utility multiple	20.00x
Assumed premium	2.00x
Adjusted P/E	22.0x

Gas utility valuation	13.26
------------------------------	--------------

Valuation - Other	(0.16)
2020 Blended multiple	27.33x

Other valuation	(4.36)
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Total valuation	45.00
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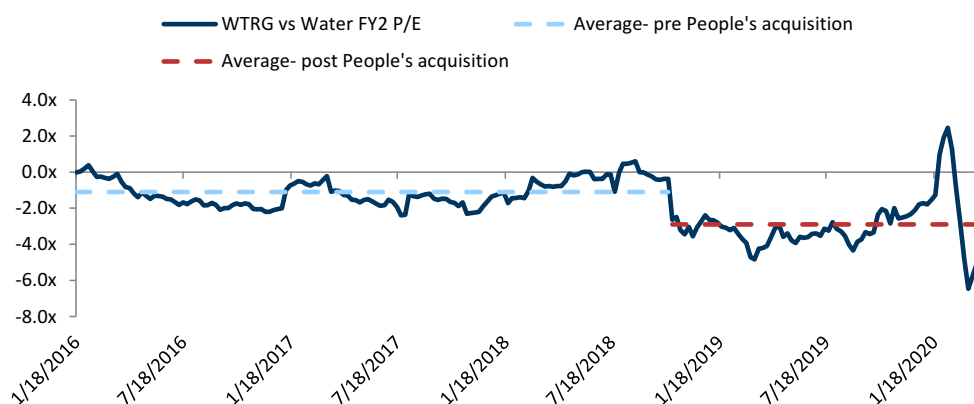
Current price per share	\$42.80
Return potential	5.14%
Dividend yield	2.19%

Total return potential	7%
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Source: Goldman Sachs Global Investment Research

Exhibit 62: ...and see WTRG's ~3-4x relative discount to pure-play water utilities as justified given its new gas utility exposure, which could affect ESG comparability

WTRG vs Regulated FY2 P/E



Source: Goldman Sachs Global Investment Research, FactSet

Company Overview

Essential Utilities Inc. (WTRG) formed from Aqua America's acquisition of privately owned Peoples Gas, completed on March 16, 2020. Essential's common stock

began trading under the NYSE ticker symbol (WTRG) in early February. WTRG, with a market cap of \$9.6 bn (as of 13th Apr close) market cap, serves more than 1 million water customers in 8 states and more than 740,000 gas customers in 3 states. WTRG projects 6-7% (ex. acquisitions) and 8-10% rate base growth for its water/gas utilities based on 2019 projected rate base of \$5 billion and \$2.3 billion, respectively. The key states served by WTRG are summarized in the Exhibit 52. The company operates through the following segments:

■ **Regulated Water** (~70% of total operating revenues):

- 2018 operating revenues were derived principally from the following states: ~53% in Pennsylvania, 9% in Ohio, 9% in Texas, 9% in Illinois, and 6% in North Carolina
- The company's municipal growth strategy has accelerated significantly, largely due to the passage of Fair Market Value legislation(FMV) in several of its states. Aqua has added more than 33,000 new customers from 10 closed or signed municipal acquisitions in 2018

■ **Regulated Gas** (~30% of total operating revenues):

- The regulated gas business consists of 4 utility companies - Peoples Natural, and Peoples Gas (Formerly Peoples TWP) are regulated by the Pennsylvania Public Utility Commission. Peoples Gas – West Virginia is regulated by the West Virginia Public Service Commission. Peoples Gas – Kentucky is regulated by the Kentucky Public Service Commission
- ~740,000 customers and 1,500 employees in western Pennsylvania, Kentucky and West Virginia

■ **Market based business** (<1% of total operating revenues):

- **Aqua Infrastructure-** provides non-utility raw water supply services for firms in the natural gas drilling industry
- **Aqua Resources-** provides water service through O&M contracts with a municipal authority and another party close to utility companies' service territory; and offers, through a third-party, water and sewer line protection solutions and repair services to households

Disclosure Appendix

Reg AC

I, Insoo Kim, CFA, hereby certify that all of the views expressed in this report accurately reflect my personal views about the subject company or companies and its or their securities. I also certify that no part of my compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

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Growth is based on a stock's forward-looking sales growth, EBITDA growth and EPS growth (for financial stocks, only EPS and sales growth), with a higher percentile indicating a higher growth company. **Financial Returns** is based on a stock's forward-looking ROE, ROCE and CROCI (for financial stocks, only ROE), with a higher percentile indicating a company with higher financial returns. **Multiple** is based on a stock's forward-looking P/E, P/B, price/dividend (P/D), EV/EBITDA, EV/FCF and EV/Debt Adjusted Cash Flow (DACF) (for financial stocks, only P/E, P/B and P/D), with a higher percentile indicating a stock trading at a higher multiple. The **Integrated** percentile is calculated as the average of the Growth percentile, Financial Returns percentile and (100% - Multiple percentile).

Financial Returns and Multiple use the Goldman Sachs analyst forecasts at the fiscal year-end at least three quarters in the future. Growth uses inputs for the fiscal year at least seven quarters in the future compared with the year at least three quarters in the future (on a per-share basis for all metrics).

For a more detailed description of how we calculate the GS Factor Profile, please contact your GS representative.

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Across our global coverage, we examine stocks using an M&A framework, considering both qualitative factors and quantitative factors (which may vary across sectors and regions) to incorporate the potential that certain companies could be acquired. We then assign a M&A rank as a means of scoring companies under our rated coverage from 1 to 3, with 1 representing high (30%-50%) probability of the company becoming an acquisition target, 2 representing medium (15%-30%) probability and 3 representing low (0%-15%) probability. For companies ranked 1 or 2, in line with our standard departmental guidelines we incorporate an M&A component into our target price. M&A rank of 3 is considered immaterial and therefore does not factor into our price target, and may or may not be discussed in research.

Quantum

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Disclosures

Coverage group(s) of stocks by primary analyst(s)

Insoo Kim, CFA: America-Diversified Utilities, America-Regulated Utilities. Michael Lapides: America-Diversified Pipelines, America-Diversified Utilities, America-Energy MLPs, America-Independent Power Producers, America-Regulated Utilities. David Fishman, CFA: America-Diversified Utilities, America-Independent Power Producers.

America-Diversified Pipelines: Enbridge Inc., Enbridge Inc., Kinder Morgan Inc., ONEOK Inc., Tallgrass Energy LP, TC Energy Corp., TC Energy Corp., Williams Cos..

America-Diversified Utilities: Avangrid Inc., Centerpoint Energy Inc., CMS Energy Corp., Dominion Energy Inc., DTE Energy Co., Entergy Corp., Exelon Corp., FirstEnergy Corp., NextEra Energy Inc., OGE Energy Corp., Public Service Enterprise Group, Sempra Energy.

America-Energy MLPs: Cheniere Energy Inc., Cheniere Energy Partners, Energy Transfer LP, Enterprise Products Partners LP, Magellan Midstream Partners, Plains All American Pipeline LP, Plains GP Holdings, Rattler Midstream LP, TC PipeLines LP.

America-Independent Power Producers: Clearway Energy Inc., NextEra Energy Partners, NRG Energy Inc..

America-Regulated Utilities: Ameren Corp., American Electric Power, American Water Works, Atmos Energy Corp., Consolidated Edison Inc., Duke Energy Corp., Edison International, Essential Utilities Inc., Evergy Inc., Eversource Energy, NiSource Inc., PG&E Corp., Pinnacle West Capital Corp., Portland General Electric Co., PPL Corp., Southern Co., WEC Energy Group, Xcel Energy Inc..

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Goldman Sachs is a specialist in the relevant securities and will at any given time have an inventory position, "long" or "short," and may be on the opposite side of orders executed on the relevant exchange: American Water Works (\$133.61) and Essential Utilities Inc. (\$44.30)

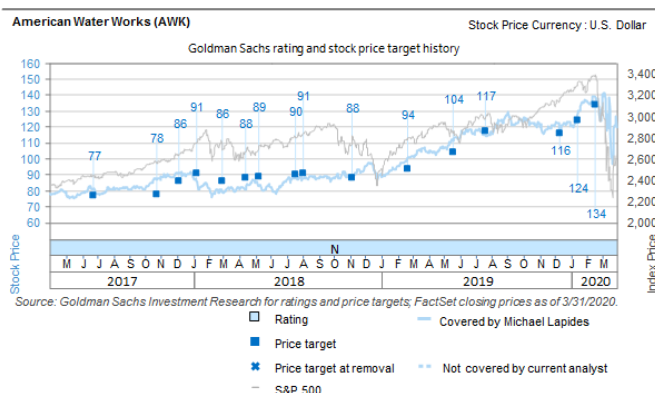
Distribution of ratings/investment banking relationships

Goldman Sachs Investment Research global Equity coverage universe

	Rating Distribution			Investment Banking Relationships		
	Buy	Hold	Sell	Buy	Hold	Sell
Global	46%	39%	15%	65%	57%	52%

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